CERTIFICATE

Certified that I have gone through the dissertation submitted by **DR.T.HEMA DEVI,** a student of Final M.D. (s), Branch – I, Maruthuvam, Government Siddha Medical College, Chennai – 106, and the dissertation work has been carried out by the individual only.

Professor and Head of the Department
Post Graduate Maruthuvam Department,
Govt.Siddha Medical College,
Chennai- 106.

Place : Chennai
Date :

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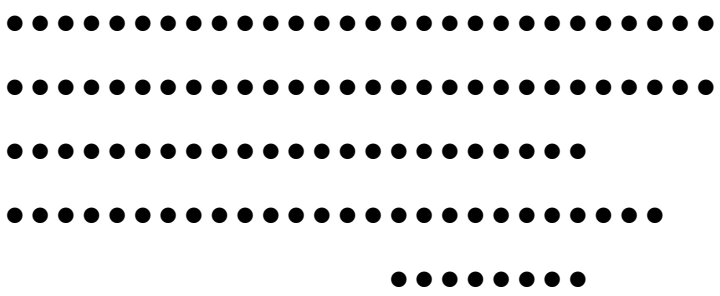
INTRODUCTION

Siddha system emphasis a harmonious blending of physical, mental, social, moral and spiritual welfare of an individual



The therapeutic system of tamizhians is one of the system of medicine dating upon 5000 years. The ancient tamils made an insight into themselves in search of longevity. They developed two ways by which they achieved mastery over nature.

The one is yogic way

And the other is through medicine

These scholars were called Siddhar's, hence the therapeutic system propagated by them is also known as "siddha system of medicine".

In India peptic ulcer disease is common. An estimated 15,000 deaths occur each year as a consequence of peptic ulcer disease (PUD). Nowaday's people are getting too very stressed in order to keep in pace with modern life style. Adding fuel to the fire, the advent of the fast foods, tinned food and the other junk ones are giving more trouble to the gastro intestinal tract, Hence over straining of the gastro intestinal may lead to a lot acid peptic disorders, which is becoming a common disease of the world

Eri Gunmam, as explained by great siddhars, has clinical symptoms as like that of peptic ulcer disease. The recurrence of **Acid Peptic Disorders/pepsin** which may be

primarily resulted from stress and anxiety but also related with the coinciding existence of **Helicobacter pylori infection** in peptic ulcer cases.

A comparative study of the medicines of those ancient cultures is necessary to throw glowing light on the dark corners of our system.

AIM AND OBJECTIVES

AIM:

Siddha system considers body as a whole of five elements viz “Mann”, “Neer”, “Thee”, “Vazhi”, “Akayam”. These are the fundamental principles of creation, protection and destruction of the world.

The forces behind the three are respectively referred to as vadham, pitham, kapham in the case of human body. In a healthy person the respective ratio is 1:1/2:1/4; any imbalance in this ratio can cause disease. So, the basic emphasis of siddha system is on to promote good health that is to prevent diseases by careful dieting and achieve longevity and immortality.

Nowadays **Eri Gunmam** is estimated that roughly 10% of the population is expected to develop this disease during their lifetime and the percentage seems to be rising at an alarming rate, Therefore here is an urgent need to attend to this awful disease and to relieve the patient from the unbearable problem. There are two main approaches for treating peptic ulcer.

1. Maintain the Internal environment of Stomach and Intestine.
2. Reen forcing gastric mucosal protection without causing any side effects. (Using Siddha drug Therapy).

OBJECTIVES:

1. To make a detailed study of various siddha literatures like yugi vaidhya chindamani 800, Pararasa Segaram, Dhanvanthiri vaithyam, Aavi Allikum Amuthamurai surukkam, Agasthiyar Karukkidai Nool and Contemporary interpretation.
2. To know the correlation of Aetiology, clinical features complication. Prognosis of **Eri Gunmam** in siddha aspect with those of peptic ulcer disease in modern aspect.

3. To have an idea about the incidence of the disease with regard to age, sex, blood group, socio-economic status, occupation, history of food habits and drug ingestion.
4. To have an extensive study that how the disease alters the normal conditions which are dealt under Mukkutra Verupadugal, Pori pulangal, Udal Kattugal, Neerkuri, Neikuri under Ennvagai thervu and Naadi in **Eri Gunmam**.
5. To utilise the possible modern diagnostic parameters to confirm the diagnosis and observe the prognosis.
6. Clinical trial on patients with **EriGunmam** with prepared poly herbal and herbomineral trail medicines.

    1. **MALLIYATHI CHOORANAM** – 1 gram, twice a day with hot water, after food.

    2. **BHOJANA KUDORI MATHIRAI** – One tablet, OD with hot water, after food

7. To evaluate the Biochemical, microbiological and pharmacological impact of the trial medicines.
8. To Evaluate Bio- statistical data of the clinical trial.

REVIEW OF SIDDHA LITERATURES

GUNMAM:-

Synonyms of Gunmam Noi

❖ Gulmum

DEFINITION : (●●●●●

Gunmam is the generic name for the Gastro intestinal disorder, pertaining to the stomach, characterized by indigestion, epigastric pain, gastric eructation, water brash, belching, borborygmus, nausea, vomiting etc.

The disease not only affects the physical health of the person, but also the mental health. The characteristic excruciating pain over the abdomen drives one to the extent of commiting suicide. In short **Gunmam** means reduced status of physical and mental activities.

AETIOLOGY ●●●●●●●●●●●●●●

Therayar says.

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According to the siddha concept, **Gunmam** occurs due to the derangement of vatham, when the vatham permanently accumulates in the intestine, it impairs the Pitha and Kabha Kutram, leading to **Gunmam**.

As for as the siddha system of Medicine concerned, an individual is advised not to mask his emotions, since it may be aggregated and eventually. Precipitated as disease like gunmam, Where the bio-Medical system also tells the same.

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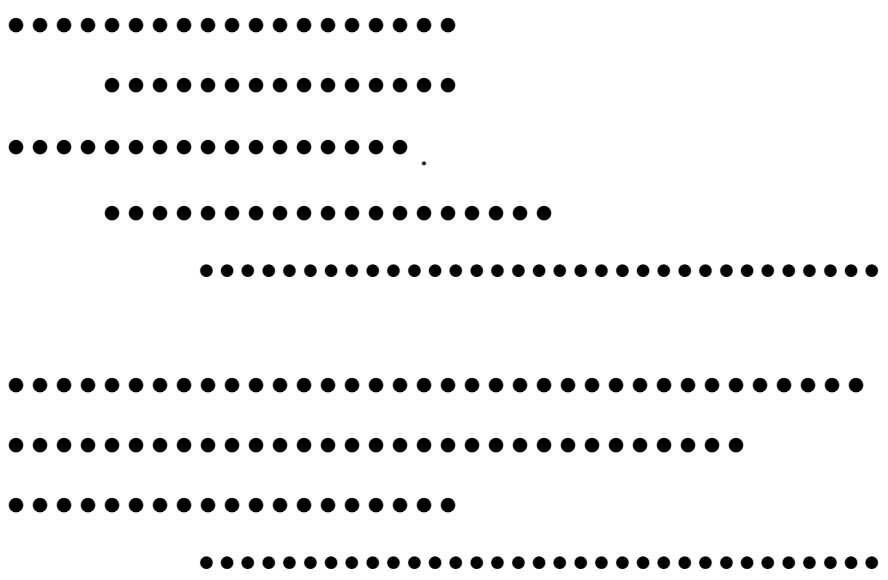
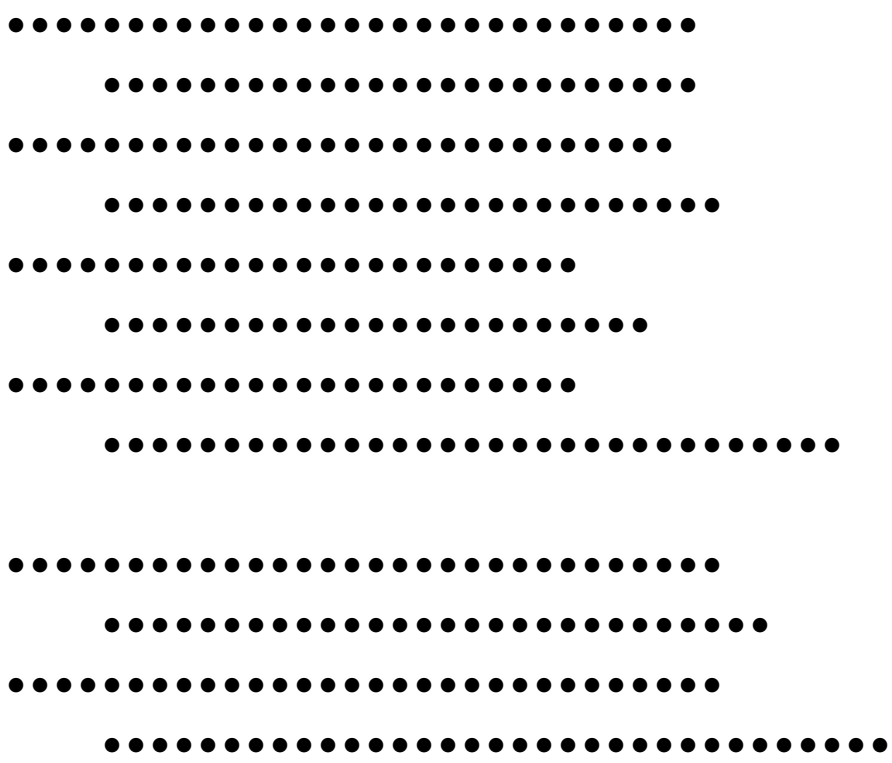


YUGI VAIDHYA CHINTHAMANI – 800

The saint yugi says that there are two main reasons for the onset of Gunman

- Personal habits
- Mental make up



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Excessive intake of spicy food, astringents tuberous diet, inadequate intake of diet, starvation, angry, mental depression, disobedience of guru, anti social Activities like starvation of young children, raping, etc., principles are the factors which cause **Gunmam**.

AGASTHIYAR KANMA KANDAM:-

According to Agasthiyar Kanma Kandam.

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The disease of a person is predetermined in his earlier, birth and he will be suffering on slaught of previous deeds.

AGASTHIYAR GUNA VAHADAM.

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Mainly the **Gunmam** disease caused by indigestion. It is one of the causative factors.

PADARTHA GUNA CHINDAMANI:-

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According to Padartha Guna Chindamani, the intake of seawater, karungalineer, water before food will subside the appetite consequently leading to **gunmam**.

AGASTHIYAR VAIDHYA KAVIYAM - 1500

Causes and Clinical features:-

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According to the poem Agasthiyar in his work Agathiyar vaidhya kaviyam-1500 stated the causes and clinical feature of **“Gunma Noi”**

PARARASASEKARAM :

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It says that the food substances containing rice husks, stones, indigested food particles, excessive cellular content, hairs and other unwanted materials can cause **Gunmam** by producing micro organisms in the stomach.

THIRUMOOLAR KARUKKIDAI VAIDHYAM 600

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According to Thirumoolar Karukkidai vaidhyam, **gunmam** occurs when the pitham combines with Vayu and cause pain in the stomach during digestion.

SIMITTU RATHNA SURUKKAM:-

According to Simittu Rathna surukkam, the important causative factor for the eight types of **Gunmam** is iniquitous.

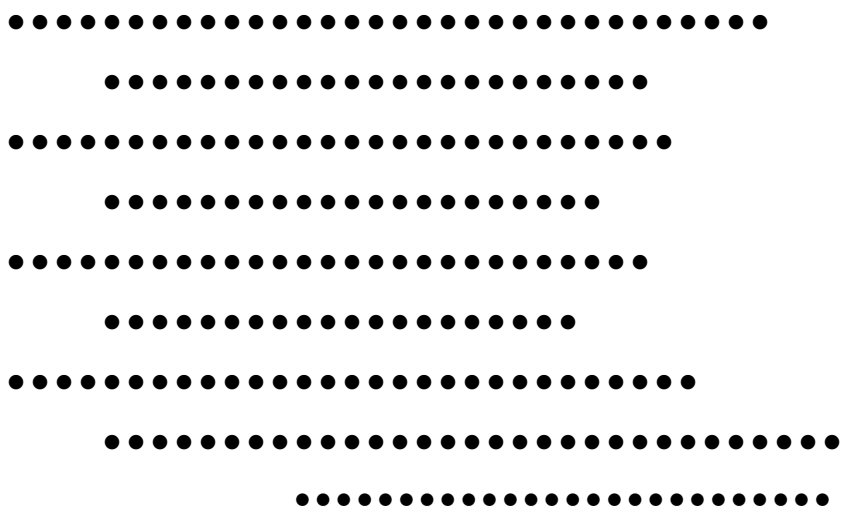
ASTROLOGICAL CAUSES:-

The astrologer had found out the intimate relationship between human body and the planetary movements and the disease like **gunmam**. The above planetary movements are mentioned to have produced **Gunmam.**

CLASSIFICATION OF GUNMAM:-

According to siddha literatures, **Gunmam Noi** is classified into eight types.

YUGI VAIDHYA CHINTHAMANI – 800



Saint Yugi has classified the **gunmam** into eight types:-

They are:

1. Vatha Gunmam
2. Vayu Gunmam
3. Pitha Gunmam
4. Eri Gunmam
5. Vali Gunmam
6. Satthi Gunmam
7. Sanni Gunmam
8. Sethuma Gunmam

THIRUMOOLAR THIRUMANDRAM:-

Saint Thirumoolar also classified the gunman into eight types. Further he grouped the eight into Mukkutra theory heading as follows,

a. Due to the derangement of vatham-3
    - ❖ Vatha Gunmam
    - ❖ Vayu Gunmam
    - ❖ Vali Gunmam

b. Due to the derangement of Pitham -3
    - ❖ Pitha Gunmam
    - ❖ Eri Gunmam
    - ❖ Satthi Gunmam

c. Due to the derangement of Kabam -2
    - ❖ Sethuma Gunmam
    - ❖ Sanni Gunmam

THIRUMOOLAR KARUKADAI VAIDHYAM – 600

Thirumoolar classified Gunmam into four types as follows

1. Vatha Gunmam
2. Pitha Gunmam
3. Iya Gunmam
4. Mega Gunmam

DHANVANDRI VAIDHYAM:-

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Saint Dhanvandri says that 108 disease arise from the abdomen.
8 among them are **gunmam** as follows

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Vatha Gunmam, Vail Gunmam, Satthi Gunmam, Soolai Gunmam, Pitha Gunmam, Kabha Gunmam, Eri Gunmam, Surai gunmam.

Among the eight, Vatha, Satthi, Soolai Gunmam are incurable and Pitha, Kabha, Eri, Surai, gunmam and Vali gunmam are the curable varieties by the treatment.

AGASTHIYAR GUNAVAGADAM – 8

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AGATHIYAR KANMA KANDAM :

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AGASTHIYAR -2000

Gunmam has been classified into eight types.

- ❖ Vatha Gunmam
- ❖ Pitha Gunmam
- ❖ Kabha Gunmam
- ❖ Satthi Gunmam
- ❖ Eri Gunmam
- ❖ Vali Gunmam
- ❖ Soolai Gunmam
- ❖ Sanni Gunmam

ATHMA RAKSHAMIRTHAM:-

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ANUBHOGA VAITHYA DEVA RAGASIYAM:-

According to the above the verse, eight type of **Gunmam** has been described,

- ❖ Vatha Gunmam
- ❖ Pitha Gunmam
- ❖ Sethuma Gunmam

- ❖ Vatha Pitha Gunmam
- ❖ Vatha Silethuma Gunmam
- ❖ Tridhosa Gunmam
- ❖ Ratha Gunmam

KANNUSAMIYAM SIKICHAH RATHNA DEEPAM ENUM VAIDHYA CHINTHAMANI - PART II

According to Sikichah Rathna Deepam Gunmam is classified into eight type,

- ❖ Vatha Gunmam
- ❖ Pitha Gunmam
- ❖ Silethuma Gunmam
- ❖ Sanni Gunmam
- ❖ Soolai Gunmam
- ❖ Eri Gunmam
- ❖ Satthi Gunmam
- ❖ Vali Gunmam

Further he says two types of **gunmam** namely

- ❖ Raktha Vatha Gunmam
- ❖ Raktha Vatha Pitha Gunmam

Most of the authors are described about the Classification of gunmam as "**ATTA GUNMAM"**

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[Sings and symptoms of Eight Types of **gunmam**]

According to YUGI VAIDHYA CHINTHAMANI -800)

1. ●●●●●●●●●**(VATHA GUNMAM)**

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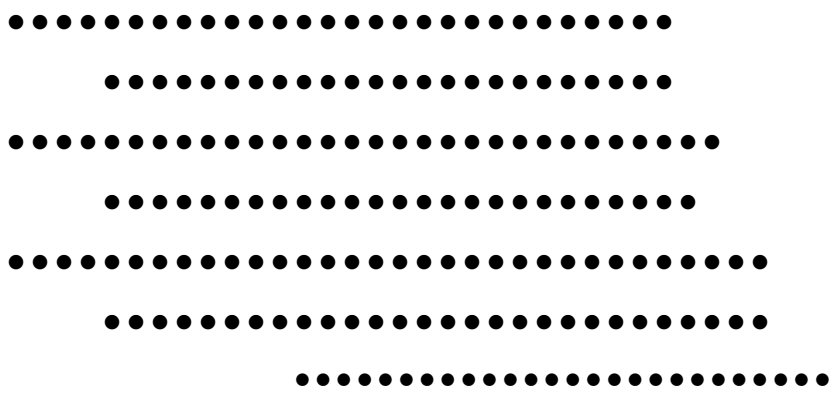
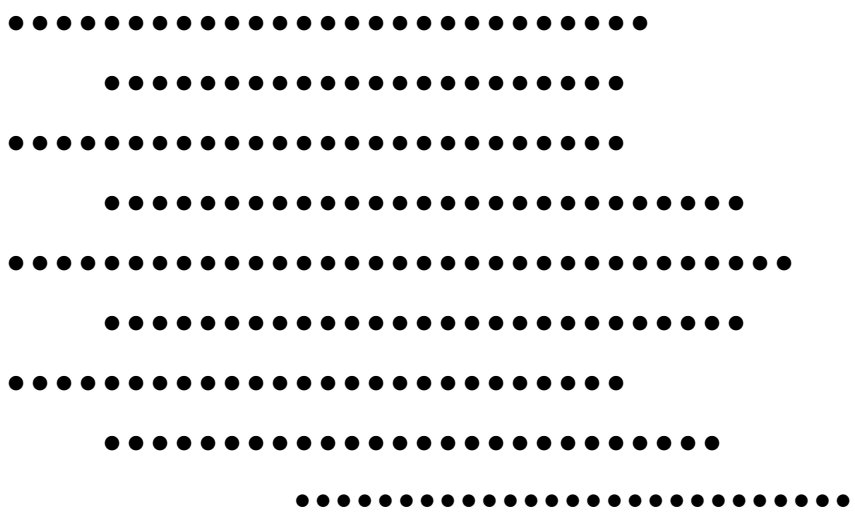


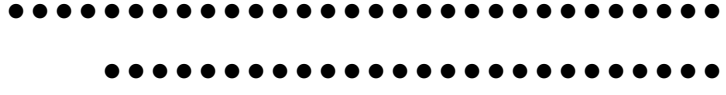
Inability to walk, constipation, General body pain, drowsiness confusion, heaviness of the body, loss of appetite, loss of strength, power diminished in the upper & lower extremities, dryness of the tongue, headache.

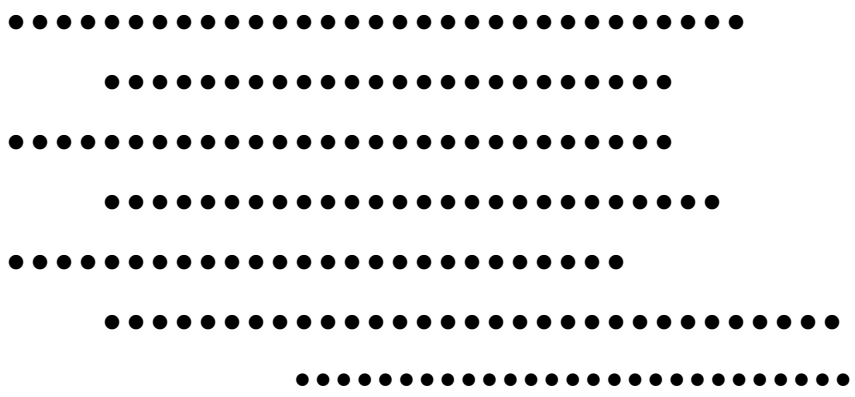
2. ●●●●●●●●● **(PITHA GUNMAN)**



Pallor of the face, vomiting, nausea, fainting, Accumulation of mucous secretion in the lungs, burning sensation of the extremities, giddiness, burning micturation, excessive thirst, constipation and dyspnoea.

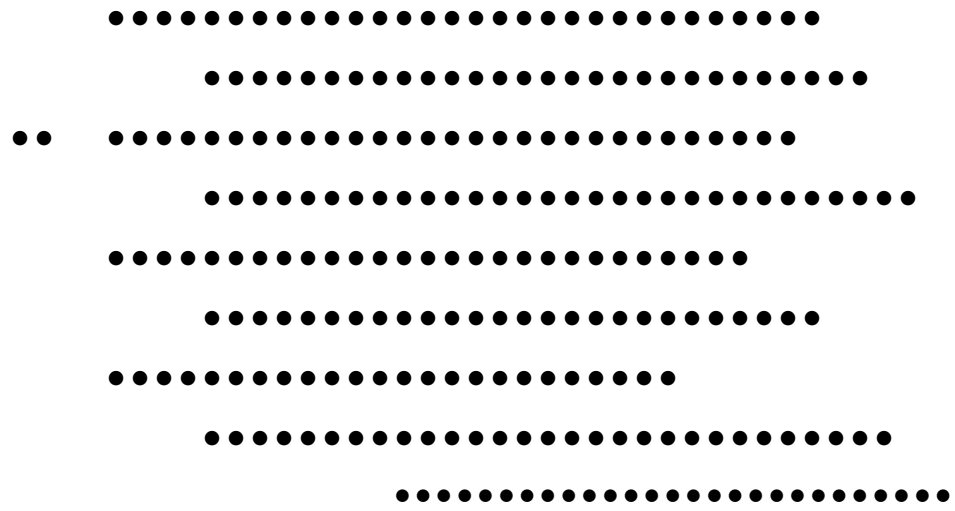
3. ●●●●●●●●●●●● (SILETHUMA GUNMAM)





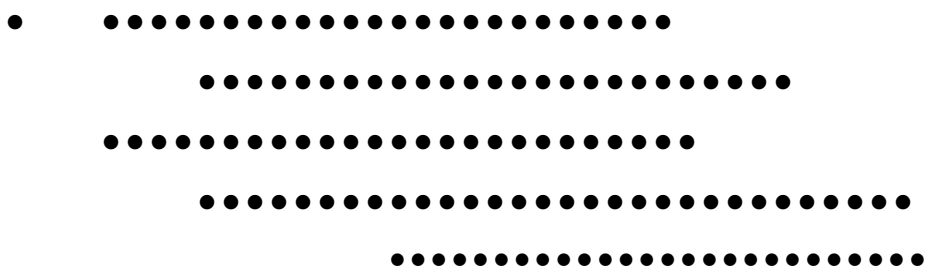
Ptylism, emaciation, loss of strength, loss of appetite, anaemia, dry cough, tremor, heaviness of head, dryness of the skin.

4. ●●●●●●●●● **(VAYU GUNMAM)**



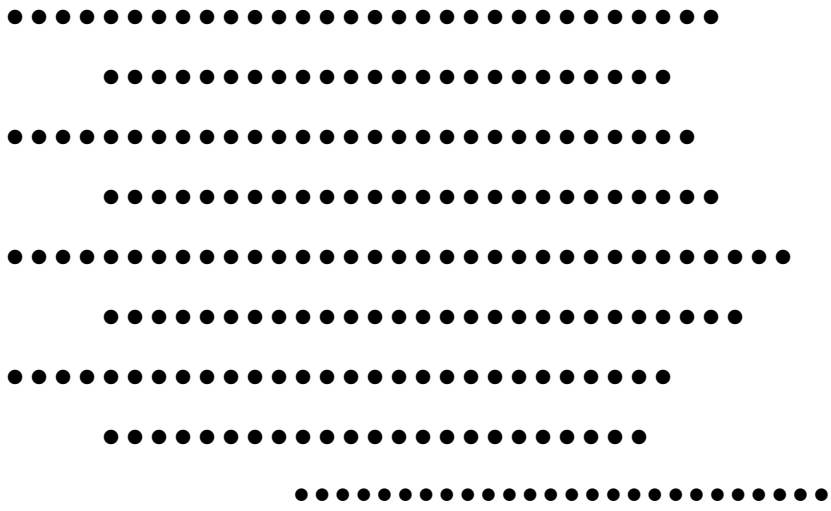
Indigestion, loss of appetite, borborygmus, tiredness, General debility, epigastric pain and halitosis, drowsiness etc.

5. ●●●●●●●● (VALI GUNMAM)



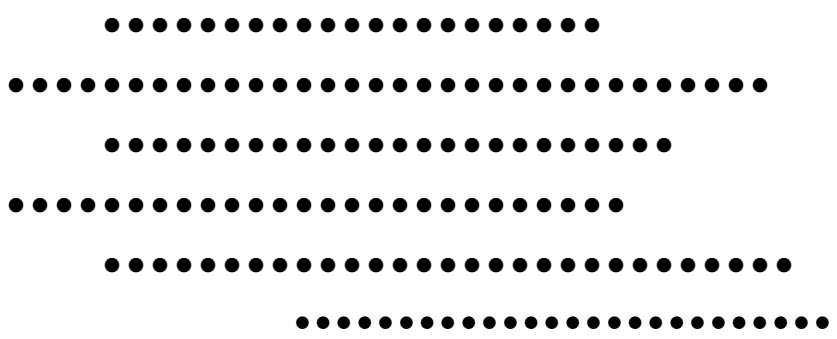
Abdominal discomfort, wrinkles in the skin, confusion, disturbed sleep, borborygmus, loss of appetite, Pain in the hypochondrium, pain in the back and hip region and pain in all over the body, fever, etc.

6. ●●●●●●●● (**ERI GUNMAM)**



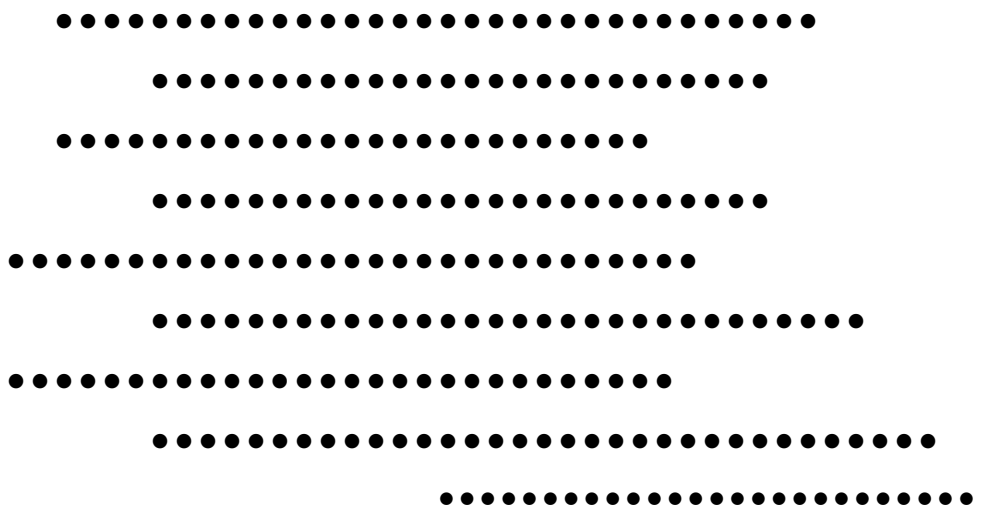
Epigastric pain, Burning in the stomach, broborygmus, water brash, head ache, bloating of the abdomen, giddiness, eructation, sweating, diarrhoea, emiaction, loss of appetite, burning sensation present all over the body, Cough are the clear manifestation of **Eri gunmam.**

7. ●●●●●●●●● **(SATTHI GUNMAM)**



Burning in the right hypochondric region, giddiness, coma, dull aching pain accompanied by vomiting, loss of strength constipation, increased appetite, prominence of veins, numbness etc,

8. ●●●●●●●●● **(SANNI GUNMAM)**



Rigor, tremor, giddiness, loss of appetite, borborygmus, excessive salivation, diarrhoea, astringent taste, dry cough, dyspnoea, chillness of the body and phobias.

JEEVARAKSHAMIRTHAM:-

Dr. Subramania Pandither says that the **Eri Gunmam** has following characteristic symptoms.

Burning in the stomach, vomiting, Nausea, Excessive salivation, giddiness, borborygmus, piercing pain, sweating, eructation, diarrhoea, Emaciation, loss of appetite, cough etc.

AGASTHIYAR – 2000 – in **Eri gunmam** symptoms

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Burning in the stomach, borborygmus, water brash, head ache, giddiness, eructation, sweating, abdominal discomfort, etc

DHANVANDRI VAIDHYAM :

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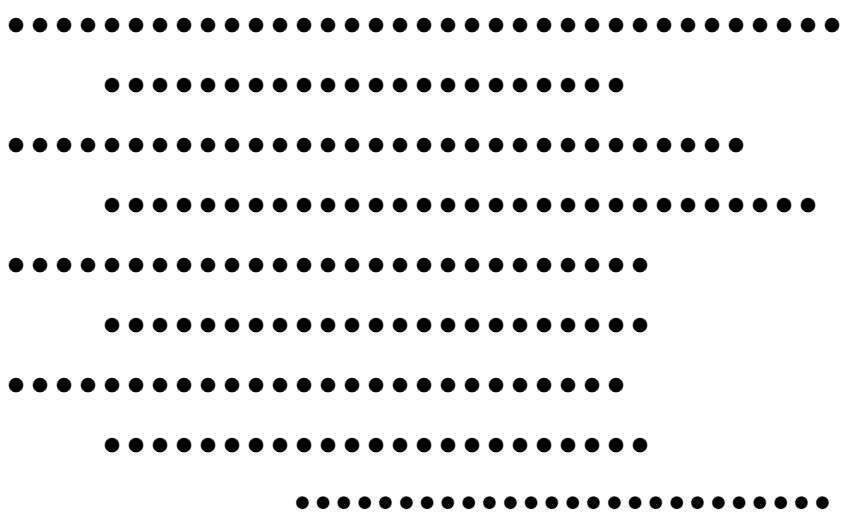
Burning sensation in the stomach Borbrygmus Excessive salivation, heaviness of head, giddiness, nausea, gastric eructation, sweating, abdominal discomfort etc.

DIFFERENTIAL DIAGNOSIS:-

Gunmam should be differentiated from the following chronic diseases of the gastro intestinal tract which resembles **“Gunmam”**

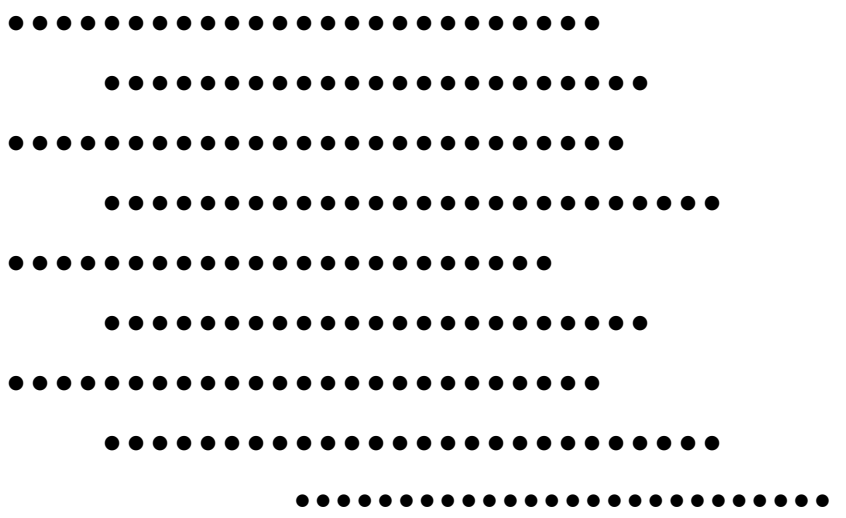
GUNMA SOOLAI

Saint yugi stated in his work yugi vaidhya Chinthamani 800 as follows



Constipation, retention of urine, Abdominal Discomfort, borborygmus, accompanied by vomiting, stabbing pain in the abdomen, excessive salivation, Eructation, general debility, fever, dryness of the body, distaste etc.

AMA SOOLAI



Indigestion, intake of impure water, intake of food which are excessive in sour, bitter and sweet and frequent starvation pain in the abdomen and the hypochondrias, which characteristic gnawing and pricking.

ULARTHU SOOLAI:-

Yugi described ularthu soolai in yugi vaidhya Chindhamani - 800 as follows:-

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If Gunmam is not diagnosed in its initial stage and failure to treat properly, it vitiates the Samaakini and viyanavayu which spread through out the body causing localised inflammation and swelling.

MUKKUTRA THEORY

As it is mentioned as “**THODAR VATHA BANTHA MALATHU GUNMAM VARATHU”** in **Theran Karisal.**

Nadi Nadai for Gunmam is “Vali Nadi”, so it is came to know that the siddha Aetiology for Gunmam disease is **“VALI NADI”** and due to variation of valikutram

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The variation of valikutram is due to irregular food habits, psychic factors, and activities, etc. As a result of vitiated vatha the three important Vayus **Udhanan, Apanan**, and **samanan** are also vitiated. The vitiation of the above phenomena results in indigestion, pain in the epigastric region, distention, increased peristalsis, vomiting etc. which are signs and symptoms of Gunmam. The persistence of the above condition results in debilitation of Rasam, Ratham, Oon, Kozhuppu and other thathus.

In **Eri Gunmam noi** there is a derangement of **"Vatha nadi"** followed by **"Pitha Nadi".**

DERANGEMENT OF VALI, AZHAL AND IYAM IN ERI GUNMAM

VATHAM

a. PRANAN (Uyirkaal)

It is responsible for respiration and digestion. It's derangement causes gastro intestinal and respiratory disorders. In **Eri gunmam** promote indigestion.

b. ABANAN (Keezhnokkukaal)

Excretion of urine and motion is done by this vayu. Its derangement leads to functional and structural change in the urogenital tract and rectum. In **Eri Gunmam**, some patients may have constipation or diarrhoea

c. VIYANAN(Paravukaal)

It is responsible for the distribution of Rasam and Senneer to all over the body. Its derangement cause sensory and motor impairment.

d. UDHANAN(Melnokkukaal)

It is present in the chest, umbilicus and nose. Its derangement causes diseases of upper respiratory tract and upper gastro intestinal tract, difficulty in speech. Vomiting nausea and belching may be present in **Eri Gunmam** due to derangement of this vayu.

SAMANAN (Nadukkaal)

It is the vayu for digestion and responsible for the nutrition and water balance of the body. Its derangement causes gastrointestinal, respiratory, and neurological symptoms. In **Eri Gunmam** produced indigestion, loss of appetite.

NAGAN:-

It is responsible for opening and closing of eyelids. Its derangement causes impaired memory and lack of coherent thinking. In **Eri Gunmam,** this vayu may not be affected.

KOORMAN:-

This vayu is responsible for vision closing of eyelids and yawning. Derangement of koorman will result in impairment of vision and lacrimal secretion. This vaya is normal in **Eri Gunmam.**

KIRUKARAN:-

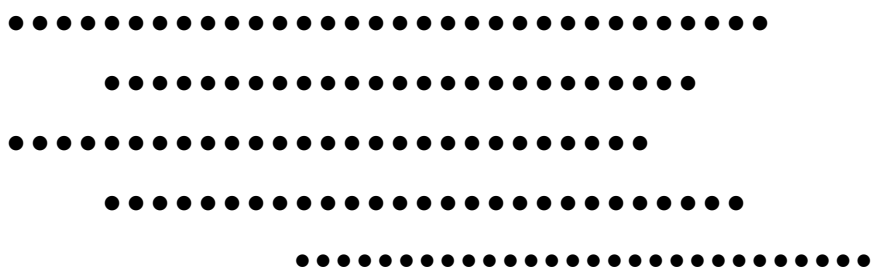
This vayu controls sneezing, cough, salivation and running nose. Its derangement causes changes in salivary secretion, Nasal secretion and hunger. In **Eri Gunmam**, loss of appetite and water brash are due to the derangement of this vayu.

DEVATHATHAN:-

This vayu is responsible for tiredness and anger, laziness is attributed to this vayu. The vayu may be affected in **Eri Gunmam**.

DHANEN JEYAN:-

Due to this vayu the total body gets inflammed after death and this vayu escapes from the body through the opening in the sutures of the skull.



PITHAM:-

ANALAGAM:-

This Azhal is present in stomach which promotes digestion and induces appetite. Its derangement produces indigestion, acidity and heart burn. In **Eri Gunmam** this azhal is most commonly affected causing indigestion, loss of appetite, belching, heart burn.

RANJAGAM:-

This gives color to the blood. Its derangement will cause anaemia. In **Eri gunmam** this pitham may not be affected.

SAATHAGAM:-

This is present in the heart and it controls the whole body and stimulates circulation. Its derangement causes stupor and destroys thinking power. In **Eri Gunmam** it is affected causing inability to do work properly.

ALOSAGAM:-

It resides in the eyes and gives correct vision. It derangement causes defective vision. This may not be affected in **Eri Gunmam.**

PRASAGAM:-

It resides in the skin and gives complexion. Its derangement may cause pigmentation disorders. This may not be affected in **Eri gunmam** patients.

IYAM:-

AVALAMBAGAM:-

It is present in the lungs and controls the heart and other four types of kabhas. If derangement it causes diseases of the respiratory tract.

KLETHAGAM:-

It is present in the stomach and moistens the food materials and also helps in digestion. Its derangement produces indigestion and loss of appetite. In **Eri gunmam** promotes indigestion, loss of appetite, belching.

POTHAGAM:-

It is present in the tongue and gives taste. Its derangement causes Anorexia. In **Eri Gunmam** it may be affected.

THARPAGAM:-

This is present in the head and makes the eyes feel cool, when, this iyam affected it produces loss of memory and derange the senses. This is normal in **Eri Gunmam** patients.

SANTHIGAM :

It is present in the joints and helps free movement. If deranged, it causes drying of synovial fluid and impairs the mobility of the joints. In **Eri Gunmam** patients, it’s not affected.

PINIYARIMURAIMAI:-

Diagnosing a disease is more important for a physician to find out the cause of the disease, complications and differential diagnosis which is very helpful to undergo a correct line of treatment.

Diagnostic methodology in siddha system are very unique and based upon 3 main principles.

- ❖ Poriyalarithal
- ❖ Pulanalarithal
- ❖ Vinathal

PORIYAL ARITHAL:-

Pori means organs of perception. Poriyal arithal or therthal is understanding by the five organs of percept nose, tongue, eyes, skin and the ears. In **Eri gunmam** patient it is as follows.

Nose : Generally normal in Eri gunmam patients.
Tongue : Dry, pale, glossy (or) coated tongue present.
Ear : Generally normal.
Skin : Generally normal.
Eye : Generally normal.

PULANAL ARITHAL

Pulan means object of senses. Pulanal therthal is understanding by the sensory objects.

Smell (Manam) : Normal in Erigunmam patients.
Taste (Suvai) : Distaste is commonly present in Erigunmam.

Vision (Oli) : Normal

Sensation (Ooru) : In **Eri Gunmam** patients Epigastric pain and burning sensation in the stomach present

Sound (Oasai) : Normal

VINATHAL:-

Vinathal is the process of obtaining the detailed history of the disease by interrogating the patient. By this, the history of the disease, complaints and duration, personal history, family history and clinical features can be gathered. When an accurate history is available, a disease can be easily diagnosed even before clinical examinations are carried out. It is the focal point of the **"Physician- patient"** relationship and established the bonding necessary for patient cure.

KAALAM (Age Distribution)

The life span of human being is nearly 100 yrs. This span is divided into 3 stages according to the domination of three humors.

- Vali kaalam - Form birth to 33 years 4 months
- Azhal kaalam - 33 years 4 months to 66 years 8 months
- Iyu kaalam - 66 years 8 months to 100 years

In **Eri gunmam** occur in the I stage (i.e) Vali Kaalam Yugi Vaidhya Chindamani describes Vali Kaalam is between birth to 33 years 4 months

IVAGAI NILAM (Place)

The geographical distribution of the land is classified into five region. Each region has its own character which influences the inhabitants physical, mental, economic and cultural activities .Knowledge about ivagai nilam is more important to find out the susceptible areas.

KURINCHI (Mountain and its surroundings)

Kucinich which is the place of Kabham consists of herbs that cure diseases. Yet, people who live here suffer from fever that affects the blood. Tumours of the abdomen and hepatomegaly may develop, persons who live in kurinchi nillam are more liable to develop iya noi.

MULLAI (forest and its surroundings)

Mullai, the forest area having herbs of bullock, Cows and goats is a place, where Pitha humor is activated. Along with pitham, vatham also combines to produce various disease. People who live this place may be suffer from **Eri gunmam.**

MARUTHAM :-(Fertile lands and its surroundings)

As marutham is a fertile river bed, it can cure the diseases caused by all the three humors. The agricultural yields of marutham land containing all the six tastes, also cures diseases. Hence it is inferred that good food have got a perfect effect and helps in prevention of the disease.

NEITHAL: - (Sea and its surroundings)

Neithal, the costal area is salty and is a place for pitha vayu. People who live here suffer form elephantiasis and hernia. This is due to the stagnation of kabham in the vital parts of the body.

PAALAI (Desert and its surroundings)

Paalai not only a place for suffering but also a place for the fatal diseases caused by vadham, pitham and kabham. **Eri gunmam** patient also found in this nilam.

PARUVA KAALAM (Seasonal effects)

Siddhars described six seasons in a year and each consisting two months, some of the diseases are more prevalent during the particular paruvakaalam and study of it will be much use in diagnosis.

S.No	KAALAM	KUTRAM	SUVAI
1.	KAAR KAALAM (Avani- Puratasi) Mid Aug – Mid Oct	Vatham ↑↑ Pitham↑	Inippu Pullippu Uppu.
2.	Koothir kaalam (Iyppasi –karthigai) Mid Oct – Mid Dec	Vatham (-) Pitham ↑↑	Inippu Karppu Thuvarppu
3.	Munpani kaalam (Marghazhi – Thai) Mid Dec –Mid Feb	Pitham (-)	Inippu, Pullipu Uppu.
4.	Pinpani kaalam (Maasi- Panguni) (Mid Feb – Mid Apr)	Kabham ↑	Inippu Pullippu Thuvarppu
5.	Elavenil kaalam	Kabham ↑↑	Kaippu

	(Chithirai –Vaigasi) (Mid Apr – Mid Jun)		Karppu Thuvarppu
6.	Mudhuvenil kaalam (Aani – Aadi) (Mid Jun – Mid Aug)	Kabham (-) Vatham ↟	Inippu

Vettru Nilai Valarchi - ↟↟

Thannilai Valarchi - ↟

Thannilai Adaithal - (-)

In **Eri Gunmam**, most of the patient affected from these paruvakkalam

1. Kaar Kaalam
2. Koothir Kaalam

SEVEN UDAL KATTUGAL:

As per siddha system of medicine, the physical body is constituted by seven thathus or constituents. These udal thathus have specific functions. There are otherwise known as udal kattugal.

SAARAM:

It is responsible for the growth and development. Its keeps the individual in good spirit and nourishes the blood. It is mostly affected, in **Eri gunmam** patients causing loss of appetite, indigestion, burning sensation all over the body.

SENNEER:

Blood gives colour to the body and nourishes the muscle responsible for the ability. It is normal in **Eri Gunman Noi.**

OON:

It gives shape to the body according to the requirement of the physical activity.

KOZHUPPU:

It helps in lubricating the different organs.

ENBU:

It gives structure to the body and protects the internal organs.

MOOLAI:

It fills the bony cavity and nourishes them.

SUKKILAM/SURONITHAM:

It is responsible for reproduction. It’s not affected the **Eri gunmam** patients

ENNVAGAI THERVU

Therayar says

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In Agasthiyar vaidhya vallathi – 600, Envagai Thervugal has been mentioned as “Attavitha Paritachi”

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1. NAA (Tongue)

The colour, character and condition of the tongue change according to the changes of Mukkutram

In **Eri Gunmam** patient, coated tongue is mostly present.

2. NIRAM (Colour)

Colour indicating Vatha, Pitha, Kabha and Thontha dhoshas cyanosis, Pallor, flushing a yellowish discolouration can be studied by means of Niram.

3. MOZHI (Speech)

Constitutes high or low pitched voice, Slurring and incoherent speech, nasal or crying hoarseness of voice etc

4. VIZHI (Eye)

Both motor and sensory disturbances of the eye are notices, burning of the eyes, lacrimation, irritation, colour change of the eyes also come under this heading.

5. SPARISM (Skin)

By palpation and inspection the following information were elicited. Temperature of the skin, whether uniformly hot or cold, thickness, fissures, soft/hard, swelling, wrinkle, pigmentation of hairs etc

In **Eri gunmam** patients, Epigastric pain and burning sensation in the stomach are present

6. MALAM (Stools)

Vatha type	:	Hard, Rough, Scanty and black
Pitha type	:	Loose stools, moderate in quantity
Kabha type	:	Clay or white coloured stools, huge in quantity with Slimy, mucus and frothy bubbles.
Thontha Type	:	Faecal Matter Possesses some of the features of two doshas.

Other examinations like diarrhoea, presence of blood mucus, rice and undigested matter in the stools and odour should be studied.

In **Eri gunmam noi**. Constipation (or) Diarrhoea and some time blood are present.

7. MOOTHIRAM (Urine)

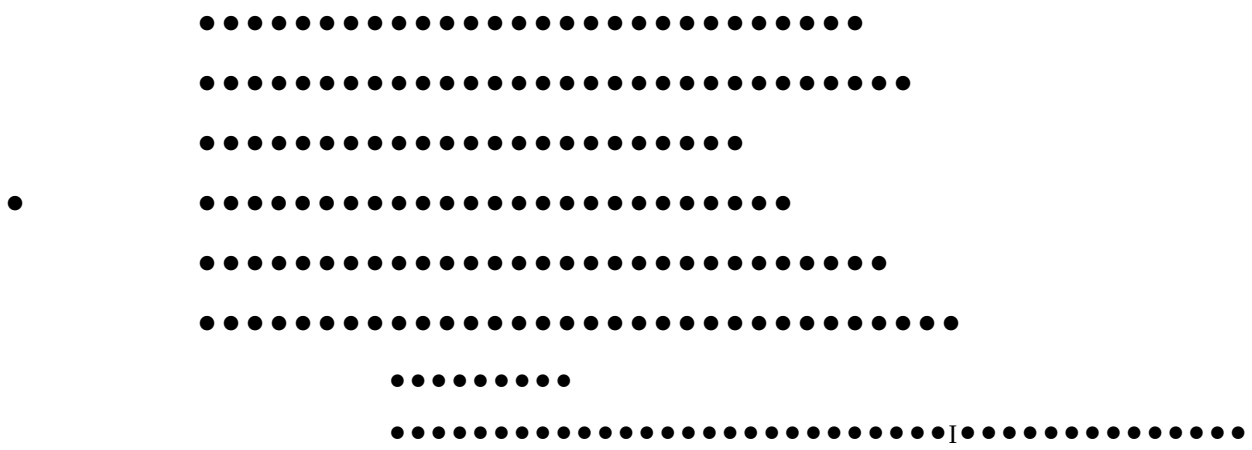
The examination of urine is classified under to headings

a) Neerkuri – Niram, Edai, Manam, Nurai, Enjal
b) Neikurai

a) NEERKURI:

- ❖ Niram indicates the colour of the urine voided
- ❖ Edai indicates the specific gravities of urine
- ❖ Manam indicates the smell of the urine voided
- ❖ Nurai indicates the frothy nature of the urine voided
- ❖ Enjal indicates the quantity of the urine voided

b) NEIKURI



PROCEDURE:

Prior to the day of urine examination for neikuri the patient is advised to take a balanced diet and the quantity of food must be proportionate to his appetite. The patient should have a good sleep. The urine voided first is collected in a glass container and is subjected to analysis with in one and half hours. A drop of gingely oil is added through the side of the vitreous without disturbing, the nature of the neikuri should be noticed in direct sunlight…

The character of Vatha near:

The character of Pitha near:

The character of Kabha near:

The character of Thontha near:

The character of Mukkutra near:

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8. NAADI (PULSE)

Naadi is responsible for the existence of life and can be felt one inch below the wrist on the Radial side by means of palpation with the tips of index, middle and ring fingers corresponding to vatham, pitham and kabham.

Three humours vatham, pitham, and kabham exist in the ratio of 1: 1/2:1/4 normally, derangement in these ratio leads to various disease entities.

In the Gunma noi the following nadi can be felt

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The facts regarding Ennvagai thervugal suggests that it is mostly used diagnostic role is siddha system of medicine and more concentration should be emphasized to earn proficient knowledge.

DIAGNOSIS:

Final diagnosis is made on the basis of the points discussed under the heading clinical features, investigation and the pulse reading of any one of the provocation of mukkutram, which are the confirmative signs of the disease **Eri gunmam.**

PROGNOSIS:

Eventhough all the gunmam can be cured by proper treatment, the prognosis in Vatha, Sanni and Iya Gunmam are bad. The following conditions are present bad prognosis.

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NOI NEEKAM (MANAGEMENT)

Siddha system of medicine is based on the mukkutra theory and hence the treatment is mainly aimed to being down the three doshas to its equilibrium state and there by restoring the physiological conditions of various thathus.

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Hence Gunmam occurs due to the vitiation of vatham it can be set right by giving viresanam.

Any one of the following purgatives may be given.

1. Vellai ennai – 5 to 30 ml, early in the morning 3-5 days
2. Merugulli ennai – 8 to 15 ml, early in the morning

According to the condition of the patient and the disease the selection of drug and dosage may be altered.

TREATMENT OF DISEASE:

After the three dhoshas are brought down to its equilibrium state, the sings and symptoms of disease should be treated properly.

For this study,

1. MALLIYATHI CHOORANAM -1 gram, twice a day with hot water After food
2. BHOJANA KUDORI MATHIRAI - One tablet, OD with hot water After the food.

A party from these there are so many medicines available in our siddha system to prevent this disease.

PREVENTION OF DISEASE:-

Thiruvalluvar says some preventive methods.

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Hippocrates says.

“Your food shall be your medicine”.

ADVICE:-

Do’s

Following foods to be taken more

1. Banana, grapes
2. Almond milk
3. Raw goat's milk
4. Carrots and cabbage juice
5. Butter milk
6. He should chew every morsel thoroughly
7. Meals must be easily digestive substance and to have timely diet.

Don'ts

1. Intake of food stuff during stress and anxiety
2. Foods, drinks which are too hot or too cold can be avoided
3. spicy food, carbonated drinks, tinned foods are avoided
4. Smoking, alcohol, tobacco, coffee are avoided

YOGASANA TREATMENT IN GUNMAN:-

Yoga practices will help to keep our body fit as long as it lasts with all faculties in tact. To prevent disease and prolong life, yogic exercises are unequalled by any other system and the finest that human genius has ever discovered.

They also enable to have complete control over both our bodily functions and metal activity so that we can maintain good health always.

Benefits of yoga all tensions, physical, mental and emotional, will be gradually eliminated and both our body and mind will work in harmony so that we get the most out of life.

The asanas are strongly advocated for controlling Gunmam. The technique of practicing it is to be learnt under the guidance of a yogasana specialist who has also the knowledge of disease process.

The following asanas are useful to treat the abdominal discomfort.

a) PAVANAMUKTASANA
b) VAJRASANA
c) BHUJANGASANA
d) SAVA SANA
e) PASCHIMOTANASANA
f) PADA HASTASANA
g) SUPTA VAJRASANA
h) DHANURASANA
i) PRANAYAMA.

REVIEW OF LITERATURES IN MODERN ASPECT

THE DIGESTIVE SYSTEM:-

Anatomy Of The Alimentary Tract

This is a long tube through which food passes. It commences at the mouth and terminates at the anus. The parts are,

- ❖ Mouth
- ❖ Pharynx
- ❖ Small Intestine
- ❖ Large Intestine

- ❖ Oesophagus
- ❖ Stomach
- ❖ Rectum
- ❖ Anal Canal

Accessory organs:

- ❖ 3 Pairs of Salivary glands.
- ❖ Pancreas
- ❖ Liver and the Biliary Tract.

STOMACH:

The stomach functions as a chamber in which chemical and mechanical disruption of ingested foods takes place.

The stomach is a J-shaped dilated portion of the alimentary tract situated in the epigastric, umbilical and left hypochondriac regions of the abdominal cavity. Stomach capacity is 1500 cc. It is continuous with the oesphagus at the cardiac orifice, and with the duodenum at the pyloric orifice.

The Stomach has anterior and posterior surfaces, upper and lower curved borders. The upper border is called the lesser curvature and the lower border is called the greater curvature.

The part of the stomach above the cardiac orifice is the fundus, the main part is the body, lower part and the pyloric antrum.

WALLS OF THE STOMACH

The four layer of tissues.

1. Peritoneum a. Greater omentum
   b. Lesser omentum

2. Muscle layer.
3. Mucous membrane lining.

BLOOD SUPPLY TO THE STOMACH

ARTERY:

- ❖ Left gastric artery
- ❖ Right gastric artery
- ❖ Left gastroepiploic artery
- ❖ Right gastroepiploic artery
- ❖ Short gastric arteries.

VENOUS DRAINAGE:

- ❖ Left gastric vein
- ❖ Right gastric vein
- ❖ Left and Right gastro epiploic veins
- ❖ Prepyloric vein of mayo
- ❖ Short gastric veins.

Lymphatic Drainage:

- ❖ Superior gastric nodes
- ❖ Lower hepatic nodes
- ❖ Splenic nodes
- ❖ Sub - pyloric nodes

NREVE SUPPLY:

The sympathetic supply to the stomach is mainly from the coeliac plexus.

The parasympathetic supply is from the vagus nerves.

Sympathetic Supply

1. Reduces the motility of the stomach

2. Reduces the secretion of gastric juices

Parasympathetic Supply

1. The opposite effect.

Applied Anatomy:

Gastritis:

Irritation and inflammation of gastric mucosa

Peptic ulcer:

Ulceration of the stomach mucosa. It occurs along Lesser curvature or pyloric part of the stomach.

a) Vessels to the pyloric end of the stomach carry less blood for their size, since they are branches of the hepatic than do the left gastric and the branches to the stomach from the splenic. This difference in the blood supply is regarded as one of the factors responsible for the occurence of larger percentage of gastric ulcers towards the pyloric end of the stomach.

b) Arteriovenous anastomoses occur in the gastroduodenal mucosa and a dysfunction in these might lead to local ischemia and ulcer formation.

c) A chronic gastric ulcer usually occurs in Alkaline producing mucosa. (i.e) Pyloric antral mucosa closer to the lesser curvature. The secretion of
acid and pepsin is by the mucosa of the body and to a lesser extent, the fundus and it is controlled by (a) Vagus (b) the hormone gastrin produced by the antral mucosa.

A Chronic ulcer can perforate through the anterior wall of stomach in to greater sac producing diffuse peritonitis. If the ulcer perforates the posterior gastric wall, it will open into lesser sac and may erode the pancreas (or) the splenic artery causing bleeding.

Vagotomy :

Dividing the vagus nerve to treat the peptic ulcer

Gastrectomy :

Surgical Removal of stomach

Carcinoma of Stomach :

It is cancer of the stomach. The carcinoma spreads to the coeliac group of lymph nodes.

Barium. Meal:

It is the radiological study of the stomach, fundus of the stomach is filled by gas and dark in x-rays.

Endoscopy:

Examination of the interior of the stomach with an instrument called Endoscope.

DUODENUM :

Duodenum is the most fixed part of the small intestine. It extends from the pyloro – duodenal junction, 2.5cm to the right of midline on the transpyloric plane to the duodenojejunal flexure situated on the left side of the second lumbar vertebra.

Situation and shape:

It is situated on the posterior abdominal wall and is in the form of letter c- the concavity of its curvature is directed upwards and to the left.

Measurements:

Its length is 25cm and width is about 3.75cm It is the widest part of the small intestine .

Sub divition:

It is divided into 4 parts.

I Part – 5.0 cm in length

II Part – 7.5 cm in length

III Part – 10.0 cm in length

IV Part – 2.5 cm in length

Artery Supply:

1. Supra duodenal
2. Retroduodenal
3. Recurrent duodenal branches of the gastroduodenal trunk.

Venous Drainage :

1. Splenic vein
2. Superior Mesenteric
3. Portal Vein

Nerve Supply :

Sympathetic - T9

Para Sympathetic - Vagal fibres.

Lymphatic Drainage:

Pancreatico duodenal node.

Applied Anatomy:

The duodenal ulcers are more common in the 1st part of the duodenum for the following anatomical reasons:-

a. As the stomach empties its acid chyme, it first comes into direct contact with the antero – lateral wall of the 1st part of the duodenum
b. The submucous vascular plexus is sparse in the 1st part

In the posterior wall of the 1st part is a vascular plexus called the gastroduodenal plexus which is often the source of serious haemorrhage in posterior perforations.

Superior Mesenteric artery syndrome :

Also known as duodenal stasis is the result of compression of third part of the duodenum by the superior mesenteric artery against the aorta and the vertebral column.

PHYSIOLOGICAL ASPECT :

Functions of the Stomach:

1. The stomach acts as a temporary reservoir for food allowing the digestive enzymes time to act.
2. It produces gastric juice which begins the chemical digestion of proteins.
3. Muscular action mixes the food with gastric juice then moves it on to the small intestine.
4. Absorption takes place in the stomach to a limited extent water, alcohol and some drugs are absorbed through the walls of the stomach into the venous circulation.
5. Although iron absorption takes place in the small intestine it is dissolved out of foods most effectively in the presence of hydrochloric acid in the Stomach.
6. Intrinsic factor binds to vitamin B_{12} in the stomach and is needed for its absorption in the terminal ileum.

Gastric Juice :

This is secreted by special glands in the mucosa and consists of

Water, Mineral Salts	- Secreted by gastric glands
Hydrochloric Acid, Intrinsic factor	- Secreted by parietal cells in the gastric glands
Enzymes	- Pepsinogens secreted by chief Cells (Peptic or Zymogen)

in the glands

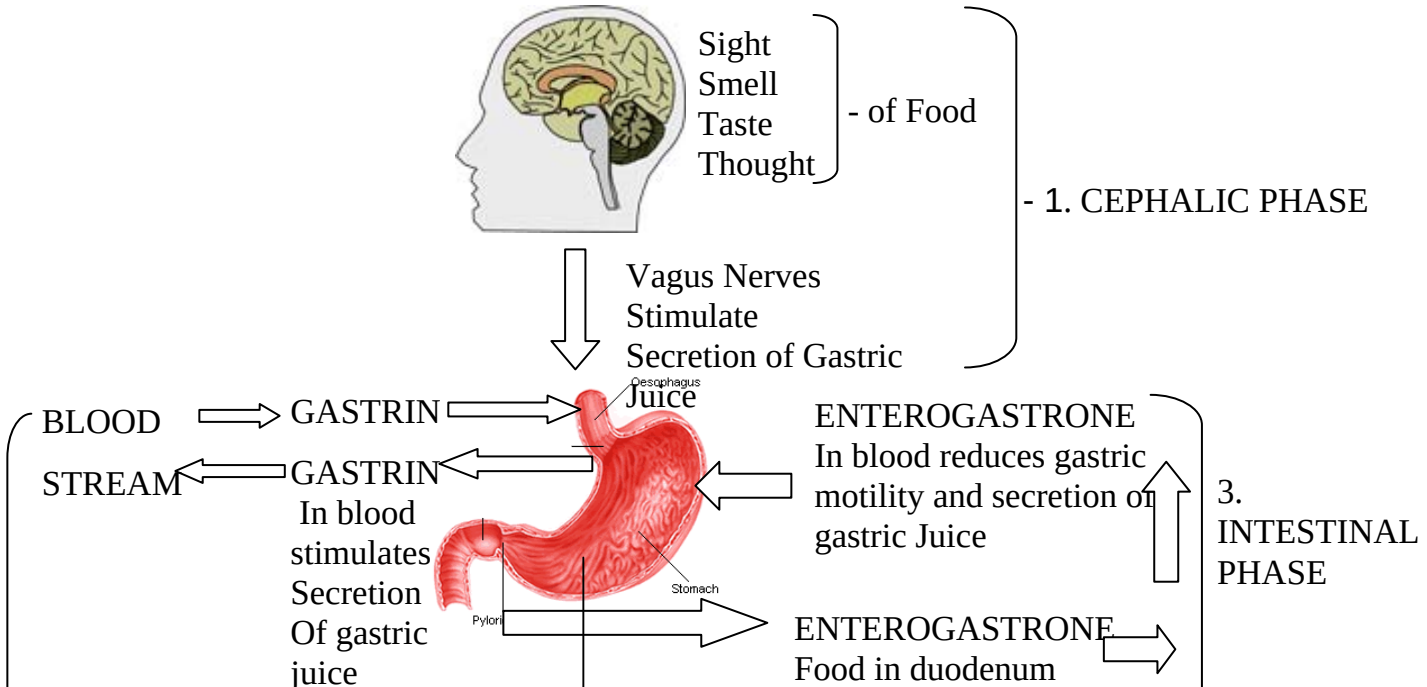
Function of gastric Juice:

1. Water further liquefies the food swallowed
2. Hydrochloric Acid:
    a. Acidifies the food and stops the action of ptyalin.
    b. Kills many microbes which may be harmful to the body
    c. Provides the acid environment needed for effective digestion by pepsin.

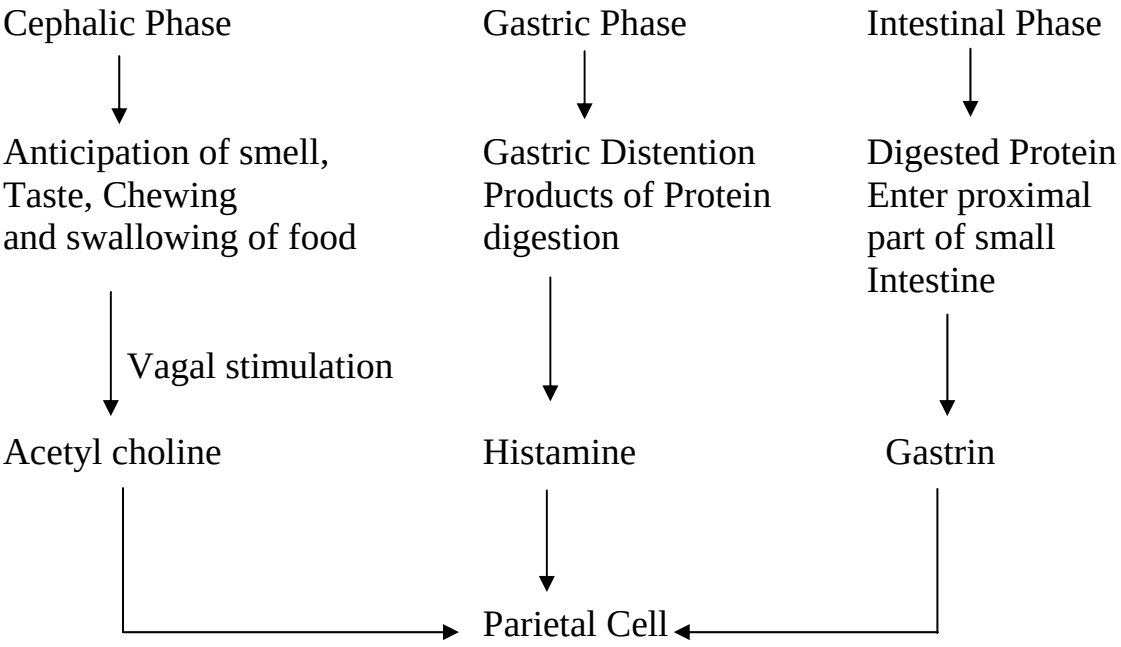
- Pepsinogens ⇨ They begin the digestion of proteins,
- Pepsins act most effectively at P^H 1.5 to 3.5
- Intrinsic factor is necessary for the absorption of vitamin B_{12}
- Mucus prevents mechanical injury to the stomach wall by lubricating the contents. It prevents chemical injury by acting as a barrier between the stomach wall and the other constituents of gastric juice.

SECRETION OF GASTRIC JUICE

There are three phases of secretion of gastric juice



CONTROL OF ACID SECRETION:



1. CONTROLLING AND CO-ORDINATING MECHANISMS

The autonomic nervous system and hormones, includes gastrin, secretin and cholecystokinin (pancreozymin) Controls and co-ordinates motility and secretion.

2. MOTILITY :

The carefully controlled motility of the tract is responsible for the orderly progression of nutrients through the system so that the stage of digestion and absorption is appropriate to a given region of the tract.

3. SECRETION:

The secretion of enzymes and detergents enables protein, carbohydrate and fat to be digested before absorption. The secretion of electrolytes provides the correct P^H for each stage of digestion.

4. ABSORPTION:

The Autonomic system consists of specialized cells together with the portal venous system and lymphatics.

5. DEFENCE MECHANISMS:

These are necessary to protect the mucosa from its own digestive enzymes and from the bacterial population to which it is exposed. These mechanisms include a rapid turnover of the epithelial cells, the production of mucous and a specialized immunological system.

1. THE CONTROLLING AND CO-ORDINATING MECHANISMS:

The cells of the gastrointestinal tracts are controlled by the transmission of chemical messengers which are aminoacids or their derivatives, amines or peptides. The transmission of the message is called neurocrine when it is across a synapse, when it is through the intercellular space it is called as pericrania and when it is via the blood it is called as endocrine. Many harmones and peptides have now been discovered. Each being produced by a distinctive cell type in the gastro – intestinal mucosa or pancreas. Peptide hormones or pericrania substances are released in response to the food in the upper gastrointestinal tract, their function being to control the progression of nutrients by modifying nervous stimuli, and to stimulate of inhibit secretions at the appropriate time.

It is now recognized that each even is influenced by a multitude of nervous and hormonal stimuli. For example, the secretion of acid by the stomach is produced mainly by vagal stimuli and the release of gastrin, but many other enteric hormones probably have smaller roles to play.

2. MOTILITY:

A part from the striated muscle in the upper oesophagus smooth muscle is responsible for the motility of the gastro intestinal tract. The smooth muscle produces "Slow waves" which are conducted over long distances. These do not result in contraction but they enable contractions in different areas to be co-ordinated.

The normal tonic contraction of the stomach is inhibited by the arrival food probably by means of a centrally mediated vagal reflex. This termed receptive relaxation so that a large increase in volume is accompanied by only a small rise in pressure with the lumen. The gastric slow wave controls the frequency and direction of antral peristalsis which is responsible for the through mixing of the gastric contents and their progressive emptying into the duodenum. Several mechanisms exists to prevent the duodenum receiving more than it can deal with chemoreceptors for fat and acid an osmoreceptors in the duodenal mucosa control gastric emptying be means of local reflexes and the release of secretin, cholocystokinin and other enteric hormones. Approximately half of a semi – solid meal leaves the stomach in about 30 minutes.

Small – intenstince:

Here the co-ordination is due to the slow wave in the longitudinal muscle fibres.

It is the pacemaker which dictates the times at which any given segment of the gut can contract. The frequency of the slow wave in the duodenum is greater than in the ileum thus enabling the proximal bowel in override mode distal areas.

3.SECRETION:

The production of secretions for the digestion of nutrients is under nervous and hormonal control.

Gastric Secretin:

In response to the sight or smell of food the vagus stimulate acid and pepsin secretion by a direct effect on the parietal and peptic cells. It also intiates the release of gastrin from the antrum. More sustained output of this hormone is produced by a rise in P^H and by ingested protein. Gastrin then enters the blood stream and acts on the body of the stomach to produce acid and pepsin to digest the protein. It stimulates acid secretion through the release of histamine. Some Mechanisms are also involved to turn of gastric secretion, once digestion with in the stomach is complete. They are largely the same as those which slow gastric emptying (i.e) the release of the enteric hormones, secretin & cholecystokinin, and also the presence of a low P^H in the gastric antrum which inhibits the further release of gastrin.

Pancreatic Secretin:

Bile and intestinal secretins, Acid, fat and hypertonic solutions in the duodenum release the hormones secretin and cholecystokinin from the duodenal mucosa into the blood stream. Secretin stimulates the acinar cells of the pancreas to produce bicarbonate which neutralizes the gastric acid and provides a neutral P^H for the activation of the pancreatic enzyme lipase, amylase, and trypsin. They are produced in response to cholecystokinin, which causes contraction of the gall bladder so that an adequate supply

of bile acids reaches the intestine when fat has to be digested the enteric hormones are responsible for the secretion of succus entericus by the mucosa of the small intestine, which contains bi-carbonate and additional enzymes.

THE ABSORPTIVE SYSTEM:

The area for absorption in the small intestine is increased several hundred fold by the presence of villi and microvilli, surface of the individual cells are made of microvilli which passes a multitude of enzyme systems for the final stage of digestion of nutrients followed by their absorption. In coeliac diseases and topica sprue and the surface area of the small intestine is reduced because of the atrophy or loss of villi, and malabsorption results.

DEFENCE MECHANISMS:

Cell Turn Over:

The epithelial cells of the gastrointestinal tract are constant renewed for example the epithelial surface of the small intestine is replaced for every 48 hours. The desquamated cells are digested and their products are reabsorbed. In the intestine, cellular turnover has been shown to be slower, than in normal germ free animals and it can be argued that this turnover to some extent provides protective mechanism.

PRODUCTION OF MUCOUS:

Mucous producing cells are present through out the gastrointestinal tract and mucous has a protective function. In the stomach, the mucous layer on the surface of the epithelium contains bicarbonate ions which form part of the barrier to gastric acid.

IMMUNOLOGICAL SYSTEM:

The lamina propria of the stomach and the intestine contains many lymphocytes and plasma cells. Some of these cells synthesis secretary IgA which is resistant to

digestion by intestinal enzyme and has a role in protecting mucosal surface from bacterial colonization is deleterious.

PEPTIC ULCER DISEASE (PUD)

DEFINITION:

An ulcer is a loss of the surface epithelium that extends deeply enough to reach or penetrate the muscularis mucosae.

Peptic ulcer disease refers to the underlying tendency to develop mucosal ulcers at sites that are exposed to peptic juice [Acid and Pepsin] . Most commonly ulcers occur in the duodenum and stomach but they also occur in the esophagus, small intestine at gastro enteric anastomoses, and rarely in ectopic gastric mucosa, for example in Meckel's diverticula.

GENERAL CONSIDERATIONS:

Peptic ulcer disease is a common disease and both the direct costs of diagnosis and treatment and the indirect cost attributable to loss of work and impaired quality of life are significant.

From the turn of the century until 1955, the incidence and prevalence of PUD in the US increased. Since then it has fallen steadily, because of medical intervention such as anti ulcer drugs.

Despite the decline in incidence and prevalence of H pylori infection PUD remains a major problem, resulting in direct costs approaching four billion dollars per year in the U.S. About 2,00,000 hospitalizations and over three million out patient visits for PUD are estimated to occur annually.

Historical data suggest that the lifetime population prevalence of symptomatic ulcers is 10%. The ratio of males to female with ulcers has fallen from a high of 10:1 and is now nearly equal.

The explanation for the rising incidence of complicated ulcer disease in the elderly remains unclear. Some of the trend may be due to increased longevity in the population, decreased death from other causes, and increased usage of Acetyl salicylic Acid (ASA) and NSAID's in elderly persons. Over age 65, death from ulcer complications.

Only recently has medical therapy for ulcer disease been developed that is potentially curative of in those patients with H. pylori infection whether this will alter morbidity and mortality of ulcer disease.

AETIOLOGY:

HEREDITY:

Patients with peptic ulcer often have a family history of disease. Gastric and duodenal ulcers are inherited as separate disorders, Thus the relative of gastric ulcer patients have three times the expected number of gastric ulcers but duodenal ulcer occurs with the same frequency amongst relatives as in the general population.

Acid – pepsin versus mucosal resistance:

The immediate cause of peptic ulceration is digestion of the mucosa by acid and pepsin of the gastric juice, but the sequence of events leading to this unknown. Digestion by acid and pepsin cannot be the only factor involved, because the normal stomach is obviously capable of resisting digestions by its own secretions.

Gastic Hyper Secretion:-

Ulcers occur only in the presence of acid and pepsin they are never found in achlorohydric patients such as those with pernicious anaemia, sever peptic ulceration

occurs in patients with the zollinger – Ellision syndrome which is characterized by very high acid secretion. Acid secretion is more important in the aetiology of duodenal than gastric ulcer, because, patients with duodenal ulcer, as a group, secrete more hydrochloric acid than normal individuals.

MUCOSAL RESISTANCE:

Several mechanisms protect the gastric mucosa from hydrogen ions secreted into the lumen of the stomach. The surface epithelial cells secrete bicarbonate ions which creates an alkaline media at the surface of the mucosa. This bicarbonate secretion is under the influence of mucosal prostaglandins. The tight junctions between the epithelial cells and their surface gastric mucous also has a protective function collectively all these mechanisms can be described as **"Gastric Mucosal barrier"**. Its integrity is important in preventing gastric ulcer and some of these mechanisms may also operate in the duodenum.

FACTORS AFFECTING MUCOSAL RESISTANCE:

The recent developments of several types of never NSAIDs that are less injurious to the gastrointestinal mucosa. The ubiquitous use of low dose aspirin for its cardiovascular, benefits may offset some of the safety of these new agents, as even low doses of aspirin (80 – 325 mg/d) are associated with a 2 to 4 fold increased risk of bleeding. The damaging effects of NSAIDs occur principally because of inhibition of prostaglandin synthesis.

Relative Risks and confidence intervals for ASA / NSAIDs gastro intestinal outcomes.

Out come	**Relative Risk**	**Confidence Interval**
Gastric Ulcer (ASA)	4.67	3.06 – 7.14
Gastric Ulcer (NSAIDs)	4.03	2.80 – 5.78

Gastrointestinal (ASA) Bleeding	3.30	2.39 – 4.54
Gastro intestinal bleeding (NSAIDs)	3.09	2.26 -4.40
Ulcer perforation (ASA)	Similar	Not well studied
Ulcer Perforation (NSAIDs)	5.93	4 – 8.81
Duodenal Ulcer (ASA)	1.71	0.69 – 1.98
Duodenal Ulcer (NSAIDs)	3.16	1.78 – 5.61
Death (ASA) [2]	Uncommon	Not well studied
Death (NSAIDs)[2]	7.62	6.17 – 9.41

AETIOLOGY OF ACUTE AND STRESS ULCERS:

Aspirin is particularly important Acute Peptic ulcers developing after head injury, burns, severe sepsis, surgery or trauma are termed stress ulcers. Gastric hyper secretion is the usual cause of acute ulcer after head injury, while the reflex of duodenal contents and mucosal ischemia may be the responsible factors after burns of shock.

OCCUPATIONAL FACTORS:

The occupational survey carried out by Hussian from Hyderabad reported that 60% of duodenal ulcer cases were in farmers. It is also common is executives, Doctors and industrialists.

SMOKING, ALCOHOL, COFFEE AND DRUGS:

Incidence of peptic ulcer is high among smokers than the others Gastric ulcer tend to heal more rapidly in patients who stop smoking. Gastric ulcer commonly occurs in association with alcoholic cirrhosis. Ingestion of caffeine containing coffee stimulates

gastric acid secretion by stimulating gastrin release. Ingestion of beer and wine also stimulate gastric acid secretion. There is much suggestive evidence that treatment with aspirin, pheny-butazone, etc., may produced peptic ulcer disease.

CONSTITUTIONAL FACTORS:

Sex incidence Male to Female ratio for duodenal ulcer varies from 4:1 – 2:1 in different communities while that for gastric ulcer is 2:1 or less.

BLOOD GROUPS:

Peptic ulcer tends be more common in people with blood group 'O' gastric ulcer tends to be more common in people with Blood Group 'A'

ANXIETY AND PERSONALITY:

People who are highly nervous and emotional and who worry fear, and feel anxiety are particularly susceptible. These emotional and nervous factors in turn may lead to hyper secretion and hyper mobility of the stomach the nervous control of the vascular system in the gastric or duodenal walls may be so disturbed that there is diminision in the blood supply to the mucosa of the stomach and duodenum making it susceptible to acid secretion.

ROLE OF HELICOBACTOR PYLORI IN PEPTIC ULCER DISEASE:

Nowadays 90% of all duodenal and gastric ulcers occur in those with concurrent chronic active gastritis due to Helicobacter pylori. H-pylori infection can be identified in the majority of patients with PUD.

In 1979 Robin Warren, discovered the bacteria. H-pylori is a short (0.2 to 0.5µm long) spiral – shaped micro aerophilic gram- negative bacillus. H-Pylori is found

primarily in the deep portions of the mucus gel layer. H-Pylori may adhere to the luminal surfaces of gastric epithelial cells but does not invade the gastric mucosa.

The H-Pylori infection is strongly associated with chronic superficial gastritis leading to peptic ulcer. It reduces the resistance of gastric mucosa against acid and gastric ulcer may result. It stimulates the gastrin secretion which inturn stimulates the acid production leading to the exposure of first part of duodenum to the excessive acidity producing duodenal ulcer. The formation of gastric metaplasia may also occur in the first part of the duodenum in response to the excessive acid. This gastric metaplasia allows the colonisation of H-Pylori in the duodenum.

ASSOCIATION WITH OTHER DISEASES:

Peptic ulcers in association with almost all diseases the incidents is noted in patients with Achlohydria namely pernicious Anaemia and Atriphic Gastritis, Gastric Carcinoma, Diaphragmatic Hernia, Duodenal stasis, Emphysema and Rheumatoid Arthritis, Cirrhosis of Liver, Tuberculosis.

PATHOLOGY:

Chronic gastric ulcer is usually single 90% were situate on the lesser curve within the antrum or at the junction between body and antral mucosa. Chronic duodenal ulcer is usually in the first part of the duodenum just distal to the junction of pyloric and duodenal mucosa, 50% are on the anterior wall. More than one peptic ulcer is found in 10-15% of patients. Acute ulcers or erosions are frequently multiple, and are more widely distributed.

CLINICAL FEATURES:

Pain:- Epigastric pain is the most frequent symptom. The pain is often described as sharp, burning (or) gnawing, However, it may be ill-defined, boring or aching or may be perceived as abdominal pressure or fullness or as a hunger sensation.

Classically, the pain of duodenal ulcer is rhythmic, that is it is regularly relieved by food, milk, or antacids but returns 1.5 to 4 hours after eating. It may awaken the patient from sleep between 1.00 and 3.00 am, especially if a snack at bed time was taken. The pain may radiate into the right hypochondrium, or posteriorly into the back. This later development, if it becomes persistent, may herald penetration of the ulcer through the posterior wall.

The other major characteristic of ulcer pain is periodicity. That is, ulcer symptoms tend to recur at intervals of weeks or months. During periods of exacerbation, the pain occurs daily for a period of weeks and then remits until the next recurrence. The classic pain of gastric ulcer is also periodic and rhythmic, but the pain pattern is different in its rhythmicity, usually the pain is least or absent during fasting, but occurs shortly after eating [5 to 15 minutes] and remains until the stomach empties, either naturally or by vomiting. For this reason most gastric ulcer patients avoid food, reduce their dietary intake, and lose weight.

Gastric ulcer pain may also occur at night, but this is less common than in duodenal ulcer patients. The pain may radiate posteriorly and sometimes to the left upper quadrant.

With duodenal ulcer or gastric ulcer, a marked increase in the pain or spread to the entire abdomen may indicate that the ulcer has perforated.

On physical examination, tenderness is classically said to occur at or to the left of the midline with gastric ulcer, and 1 inch or more to the right of the midline with duodenal ulcer.

Although there is no constant change in bowel rhythm during an ulcer relapse, some patient are aware of constipation or diarrhoea when dyspepsia reappears.

Investigation:

1. **Fractional Test Meal :-**

   This test is no more needed to make correct diagnosis of Peptic ulcer except to exclude the role of vagotomy during surgical Management.

2. **Examination of Stool:**

   Black and tarry stool melaena is well known in a Peptic ulcer when the hemorrhage is large. Small hemorrhage need special chemical test for detection.

3. **Radiological Features of Peptic Ulcer:**

   [Barium Meal Series]

4. **Endoscopy in Gastro – Entrology:**

   In recent years upper gastrointestinal endoscopy has come to the **"Gold – Standard"** in diagnosing Peptic ulcers, both still and motion, has become possible and gives excellent pictures. The flexible fibroscope now enables one to examine the Oesophagus, stomach and duodenum and at the same time obtain biopsies and material for cytological examination.

   It is used in diagnosis purpose for the Oesophagitis, Oesphageal ulcer, gastric ulcer, duodenal ulcer, duodenitis, Malignant, biopsy can also be obtained to find out in Gastric Ulcer is benign or malignant.

5. **Identification of H-Pylori Infection:**

Eradication of H-Pylori in infected subjects allow ulcers to heal and greatly reduces the chances of recurrence, identification of infection is of ulmost importance in planning ulcer therapy.

No single test can stand along as a “Gold Standard” as none is 100% accurate.

a. Non endoscopic Tests:

- ❖ Enzyme linked immuno sorbent assays [ELISAs]
- ❖ Non endoscopic urease Tests (NUTs)
- ❖ Fecal Antigen Test [FAT]

Nuts and Fat identifies patient with active H- Pylori infections.

b. Endoscopic Test:

- ❖ Rapid urease Testing
- ❖ Histology – Gastric injury also identified
- ❖ Culture test

The main advantage that culture offers is the ability to determine the Sensitivity of H Pylori isolates to commonly used antibiotics.

TREATMENT:

While various measures are available to alleviate symptoms and heal the ulcer, there is no evidence that the long term course of the disease is affected.

COMPLICATIONS:

The complications of ulcer disease are principally hemorrhage, perforation, penetration and obstruction.

GASTRO DUODENAL HAEMORRHAGE:

Classically, Hematemesis is more common in gastric ulcers and melena in duodenal ulcers, although the combination of hematemesis and Melena can occur with either ulcer when bleeding is brisk.

Ulcer hemorrhage may be recognized clinically in five patterns of increasing severity and clinical importance.

1. Occult blood in the stool with or without anaemia.
2. Coffee grounds emesis
3. Hematemesis
4. Melena
5. Sudden Collapse and shock or focal dysfunction in a vital organ

NSAID:- Induced ulcers, the most common indication for endoscopy is acute blood loss or Anaemia.

Approximately 90% of clinically significant ulcer bleeds stop spontaneously, although blood transfusion may be required. The overall mortality is about 10%. Bleeding may be the first sign of an ulcer in 10-15% of clinically recognized cases. H-pylori eradication also appears to decrease the risk of ulcer rebleeding dramatically.

PERFORATION:

Perforation is no longer common in peptic ulcer disease. In most contemporary series, admissions for hemorrhage are between four and six times more common than those for perforation.

Perforation of an ulcer is usually a dramatic event, the onset of which may be accompanied by severe generalized abdominal pain, loss of bowel sounds, and board-like rigidity of the abdominal wall. The development of perforation may be the first sign of the presence of an ulcer, particularly in those using ASA or NSAID s or suffering from zollinger Ellison syndrome.

Perforation has occurred into the lesser sac, leaked contents have tracked into the subhepatic or subphrenic areas, or leaked contents have been limited by the omentum.

Mortality is atleast 5% but may be as high as 30 -50% in elderly patients with bleeding or other comorbid conditions, particularly when the diagnosis is delayed.

Laboratory Tests:

Poymorphonuclear leukocytosis
Serum Amylase Raised
Plain x-ray of the abdomen
Barium studies, Endoscopy should be avoided.

Penetration:

Ulcer penetration into an adjacent viscus, such as the liver, pancreas, or biliary system, is rarely dramatic. Rather, it presents with gradual exacerbation of pain, loss of rhythmi city, increase in local tenderness, increasing requirement for medication, or the development of features of an additional disease process, such as pancreatitis or cholangitis. Its most common manifestation is pancreatitis. The association of pancreatitis and duodenal ulcer is more common than can be accounted for by the presence of penetration. The complication of penetration is rarely catastrophic and responds, in most cases, to intensive medical therapy only a minority of cases require surgery.

Obstruction:

Gastric outlet obstruction is the least common. Complication of peptic ulcer disease. It has two types.

- ❖ The first is due to edema and inflammation surrounding an acute ulcer, especially in the antrum or pyloric channel.
- ❖ The Second is due to chronic, permanent scarring with fibrosis and outlet narrowing

Other causes aside from peptic ulcer include carcinomas of the stomach, pancreas, liver and bile ducts as well as other extrinsic intrabdominal masses that may compress the stomach or duodenum.

Patients with gastric outlet obstruction usually complain of postprandial epigastric fullness, early satiety and vomiting of materials ingested hours to days previously. Vomiting may be worse toward the end of the day. If gastric outlet obstruction is chronic, patients may develop hypochloremic Alkalosis, tetany, weight loss and rarely aspiration pneumonia.

Up to 90% of cases of gastric outlet obstruction will come to either surgical or endoscopic dilatation with in 1 year. Balloon dilatation therapy has been reported to provide short and long term relief of obstructive symptoms. Surgical treatment is usually necessary when there is extensive scarring, a long stricture, a larger ulcer, or a badly deformed bulb. Morbidity following surgery (dumping, diarrhoea, stasis etc) approaches 10 -15%.

ZOLLINGER – ELLISON SYNDROME

This is a rare disorder in which severe peptic ulceration occurs due usually to an adenoma or hyperplasia of the islets of the pancreas secreting large amounts of gastrin which stimulates the parietal cells of the stomach excessively. The acid output may be so great that the “acid tide” may reach the upper small intestine, reducing the luminal P^H to 2 or less at the P^H pancreatic lipase is inactivated and bile acids may be precipitated causing diarrhoea and steatorrhoea. Excessive gastric secretion results in large volumes

on aspiration under ‘basal’ conditions. Pentagastrin dose not increase the secretary rate much above ‘basal’ values. Since the stomach is already continuously secreting at or near maximal rates.

CLINICAL FEATURES:

The ulcers are often multiple and severe and may occur in unusual sites such as Jejunum or the Oesophagus. The history is usually short and bleeding and perforation are common. The syndrome may present in the form of severe recurrent ulceration following a standard operation for peptic ulcer, the underlying cause not having been recognized.

The diagnosis should be suspected in all patients with unusual or severe peptic ulceration. Especially coarse barium meal examination shows abnormally coarse gastric mucosal folds. It may be confirmed by finding very high levels of gastrin in the circulation.

COMPLICATIONS OF PEPTIC ULCER SURGERY:

- Recurrent ulceration
- Recurrent ulcer due to Retained Antrum
- Afferent loop syndromes
- Bile Reflux Gastropathy.
- Dumping syndrome
- Post Vagotomy Diarrhoea.
- Osteomalacia & osteoporosis
- General malabsorption
- Carcinoma after partial Gastrectomy
- Hematologic complications:

1. Malabsorption of vitamin B_{12}

2. Impaired absorption of dietary iron
3. Impaired folate absorption.

DIFFERENTIAL DIAGNOSIS:

Other conditions that may give rise to similar upper abdominal pain syndromes include gallstone disease and its complications, gastroeophageal reflux disease, chronic pancreatitis, cancers of the stomach & pancreas, Post gastrectomy, gastritis & rarely disease of the transverse colon.

Severe ulcer pain, although uncommon, also can mimic the pain of myocardial infarction aortic dissection, biliary or ureteral, colic, acute pancreatitis, cholecystitis or diverticulitis, or mesenteric infarction. The physical findings including the location of abdominal tenderness, may aid considerably in narrowing the differential diagnosis.

MATERIALS AND METHODS

The clinical study of **Eri gunmam** was carried out in the out-patient and in-patient department, Government siddha Medical College, Chennai – 106, attached to Arignar Anna Hospital during 2006 to 2008.

Twenty patients **Eri gunmam** of both sex were selected and admitted in the Ip-patient department. Before admission all the patients were carefully examined for proper diagnosis.

Another twenty patients were treated in the out - patient department. Treatment was continued for a maximum 6 weeks with weekly follow up. The study period of this work was done during the year 2006-2008.

MODE OF SELECTION OF PATIENTS:-

Patients with symptoms like

- Patients belonging to age groups of 20 to 70 years.
- Duration of illness not more than 5years.
- Epigastric pain
- Heart burn
- Nausea and Vomiting
- Loss of Appetite
- Other relevant clinical features

EXCLUSIVE CRITERIA:-

- Acute abdominal colics
- Pyloric stenosis
- Cancer of the stomach
- Gastric outlet obstruction
- Angina

- ❖ Acute pancreatitis
- ❖ Cholecystitis (a) diverticulitis
- ❖ Complication of peptic ulcer as Haemorrhage, perforation, malignancy at the site of the ulcer.
- ❖ Diabetic Gastro Paresis.

Evaluation of clinical parameters:

During treatment, the patients were subjected to carefully history taking, It contains past, personal, and family Histories, socio- economic status, diet habits and occupational History.

Siddha mode of Diagnosis:

The following siddha mode of diagnosis, vinadhal, poriyal arithal, pulanal, Arithal, mukkutra nilai, Ezhu udal kattugal and Ennvagai thervu were employed.

Laboratory Investigations:

The blood investigation total count, differential count, ESR, Hemoglobin, Blood sugar, Blood urea, serum cholesterol and Blood groups were estimated. Routine Examination of urine, and stool were done. Endoscopy were taken.

Medicines and Dosage:-

The trial medicines used in the study are

1. MALLIYATHI CHOORANAM – 1gm twice a day with hot water after food,
2. BHOJANA KUDORI MATHIRAI – One tablet, OD with hot water after food.

"your food shall be your medicine" – Hippocrates.

So, food habits were strictly were also advised for all patients. Pranayamam and yogasanam were also advised. All the Patient at the time of discharge have been advised to attend the out patient department for further follow up:

ANNEXURE:-

The essential reports for the clinical trial are enclosed as follows.

Annexure I – Preparation and properties of trial medicines

Annexure II – Microbiological study

Annexure III – Bio – chemical Analysis

Annexure IV – Pharmacological study

Annexure V – Case sheet Proforma.

Annexure VI – Bio – Statistical report

ANNEXURE – I

PREPARATION AND PROPERTIES OF TRAIL MEDICINES

MALLIYATHI CHOORANAM:

3 Palam of Kothumalli is soaked in Anna Kaadi and Lemon Juice and then dried. The above said process is repeated with each 1 palam seeragam, sombu, Adhimathuram, dried and then powdered.

Dosage :

One gram, twice a day with hot water after food.

Indication :

Gunmam, Pithapramai, Soolai Erivu, Suvaienmai.

Ref :

Anubogha Vaidhya Navaneetham Part – 8 (Page 37)

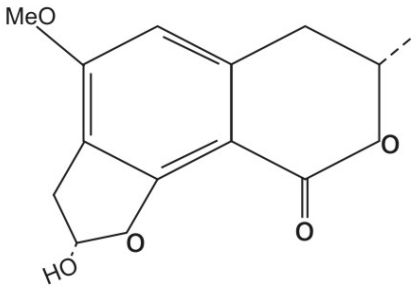
REVIEW OF INGREDIENTS:

1. KOTHUMALLI

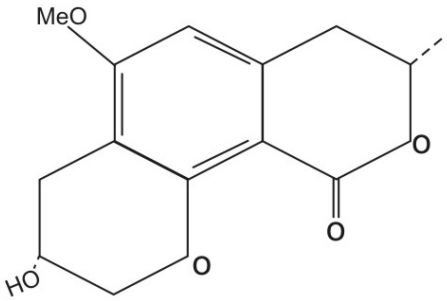
Botanical name	:	Coriandrum Sativum
Family	:	Apiaceae
Part used	:	Seed
Action	:	Stomachic, Carminative, Stimulant, Diuretic

CHEMICAL COMPOUND:

Coriandrone A, Coriandrone B, Palmitic, Petroselinic, Oleic and linoleic acids as major fatty acids along with lauric, myristic, myristolaic and palmitoleic acids are identified in seeds.



CORIANDRONE A



CORIANDRONE B

SEERAGAM

Botanical name	:	Cuminum Cyminum
Family	:	Apiaceae
Part used	:	Seed
Action	:	Stomachic, Carminative, Stimulant, Astringent

CHEMICAL COMPOUND:

Cuminaldehyde, P-menthadienal, γ- Terpinene, β- Pinene, and P-Cymene (8.70%) in seed essential oils.

SOMBU :

Botanical name	:	Foeniculum Vulgare
Family	:	Apiaceae
Part used	:	Seed
Action	:	Stomachic, Carminative.

CHEMICAL COMPOUNDS:

Seeds contain Anethole, hydrocarbones, triacylgycerols, waxes, free fatty acids, free alcohols, sterols, γ - terpinene, α-Pinene, linalool long chain esters of arachidic acid.

ADHIMATHURAM

Botanical name	:	Glycyrrhiza glabra
Family	:	Fabaceae
Part used	:	Root
Action	:	Demulcent, laxative, tonic, expectorent

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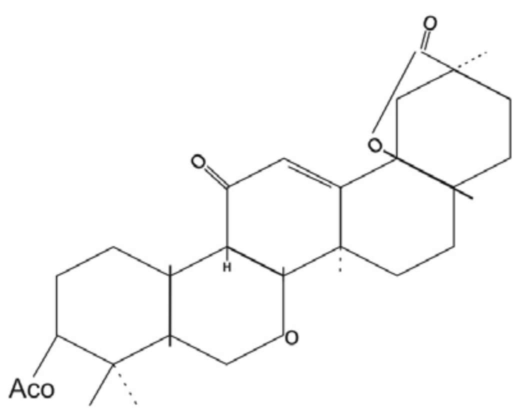
CHEMICAL COMPOUND:

Glucoliquiritinapio side, shin Flavanone, Shinptercarpin, I - methoxy ficifdinol, Semilicolisoflavone, Licoarylocoumarin, Licoriphenone, 18α-Glycyrrhetinic acid, Sodium Glycyrrhizate possessed antiulcer activity stimulated regeneration of mucous membrane.



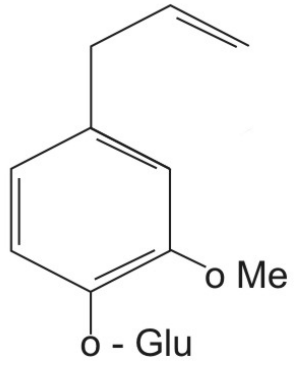
GLYCYRRHIZATE

ELUMITCHAI (LIMON)

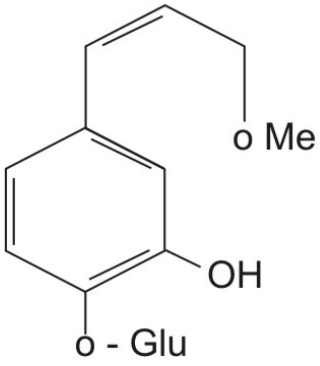
Botanical name	:	Citrus limon
Family	:	Rutaceae
Part used	:	Fruit
Action	:	Refrigerant.

CHEMICAL COMPOSITION:

Limonin, Nomilin Deacetylnomilin, Obacunone, Deacetylnomilinic acid an their 17β – D – Glucopyranosides and ichangin. Cirtusin A, Cirtusin C, Citrusin D – isolated from fruit.



CITRUSIN C



CITRUSIN D

KAADI:

Chemical Name : Glyceal Acetic acid

Action : Astringent

BHOJANAKUDORI MATHIRAI

- ❖ Seeragam fine chooranam - 105gm
- ❖ Millagu fine chooranam - 105gm
- ❖ Purified induppu - 70gm
- ❖ Purified ginger - 70gm
- ❖ Chukku - 35gm
- ❖ Purified perungayam - 35gm

These six ingredients are grind well by using juice of limon for I samam (3hours). Then it is made to tablet weighing 250mgm are prepared and stored in a container.

Dosage **:** 1 Tablet, once a day with hot water, after food.

Indication **:** **Gunmam**, Seriyamai, Akkini mantham, Soolai.

Ref **:** Prana Rakshmirtha sindhu (Page No. 207)

MILAGU :

Botanical name : piper nigrum

Family : Piperaceae

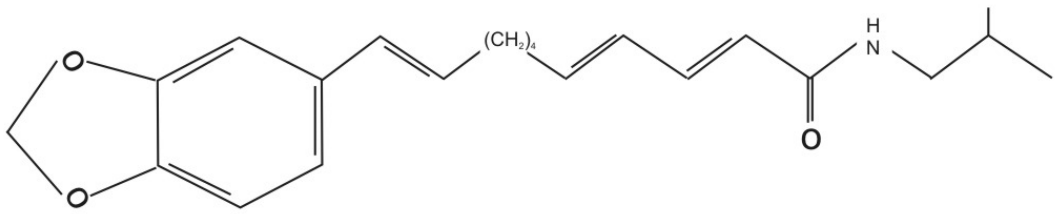
Part used : Seed

Action : Carminative, Antivatha, Stimulant

●●●●●●●●● ●●

CHEMICAL COMPOSITION:

Piperine exhibited antibacterial activity sesquisabinene, Pipercide, Feruperine, Dihydroferuperine. Pipercide showed insecticidal activity piperonal, piperine, piperoleine B.



PIPERCIDE

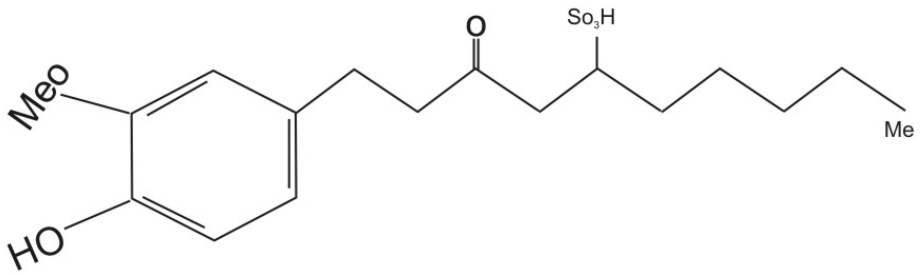
GINGER

Botanical name	:	Zingiber officinale
Family	:	zingiberaceae
Part used	:	Rhizome
Action	:	Carminative, stomachic, Digestive, stimulant.

CHEMICAL COMPOSITION:

6,gingesulphonic Acid exhibited Anti ulcer Activity which was stronger than the that of (6-gingerol and 6-shogaol.

Gingerols have. Anti microbial activity against Bacillus Subtilis and Escherichia coli.



6 - GINGESULPHONIC ACID

CHUKKU

Botanical name : Zingiber officinale.

Family : zingiberaceae

Part used : Dried Rhizome

Action : Stimulant, Stomachic, Carminative.

CHEMICAL COMPOSITION:

6,gingesulphonic Acid exhibited Anti ulcer Activity which was stronger than the that of (6-gingerol and 6-shogaol.

Gingerols have. Anti microbial activity against Bacillus Subtilis and Escherichia coli.

PERUNGAYAM

Botanical name : Ferula asafoetida

Family : Apiaceae

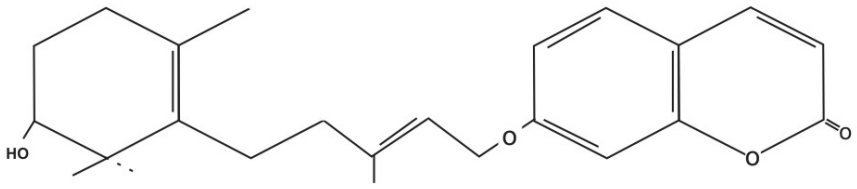
Part used : Gum

Action : Carminative, stimulant, laxative, anti spasmodic

CHEMICAL COMPOSITION:

Luteolin, assafoetidin, ferocolicin, asadisulphide, asacoumarin A and asacoumarin B, Essential oil showed significant protective action of fibrinolytic activity on alimentary hyperlipaemia furulic Acid (C_{10} H_{10} O_4) 1.28%.

It is used for functional nervous disorders and as a gastric stimulant in gastrointestinal atony with flatulence.



ASSAFOETIDIN

INDHUPPU

Chemical Name : Sodium chloride impure –Rock salt.,

Action : Laxative, carminative, Stomachic, Diuretic

ANNEXURE II

MICROBIOLOGICAL STUDY

The extract to the Malliyathi Chooranam and Bhojana kudori mathirai were tested with the following micro organisms.

1. Staphylococcus aureus.
2. Escherichia coli
3. Klebsiella
4. Proteus
5. Pseudomonas
6. Candida Albicans.

PROCEDURE

The tube dilutions method were used as a homogeneous dispersion of the drug is more effective to test the antimicrobial activity of the medicines. Dilution method are used in the preliminary screening of the antimicrobial activity.

To l0 ml of nutrient broth culture 0.5 ml of the extract were added and the tubes were incubated at 37^{o}C overnight. The next day the tubes tubes were examined for turbidity and subcultures were mode on nutuent Agar plates. Control tubes with medicines were also incubated.

The plates were incubated over light at 37^{o}c and the next day the reading was taken.

Results for the concentration of the medicines were as follows.

S.No	Organisms	Malliyathi chooranam	Bhojanakudori mathirai
1.	Staphylococcus aureus	Highly sensitive	Highly sensitive
2.	Escherichia coli	Moderate sensitive	Highly sensitive
3.	Klebsiella	Not sensitive	Not sensitive
4.	Proteus	Not sensitive	Moderate sensitive
5	Pseudomonas	Not sensitive	Not sensitive
6.	Candia Albicans	Not sensitive	Not sensitive

ANNEXURE – III

BIO – CHEMICAL ANALYSIS

Preparation of Sodium Carbonate extract :

2 gm of the **Malliyathi chooranam** (Drug I) is mixed with 5gm of Sodium Carbonate and taken in a 100ml beaker and 200ml of distilled water is added. The solution is boiled for 10 minutes, cooled and then filtered. The filtrate is called "Sodium Carbonate Extract". This procedure same as to **Bhojana Kudori Mathirai** (Drug II)

S. No	Experiment	Drug I		Drug II	
		Observation	**Inference**	**Observation**	**Inference**
I.	**TEST FOR ACID RADICALS:**				
1.	**Test for Sulphate:**				
(a)	2 ml of the above prepared extract is taken in a test tube. To this added 2 ml of 4% Ammonium Oxalate Solution	Presence of white Precipitate	Presence of sulphate	Presence of white precipitate	Presence of Sulphate
(b)	2ml of Sodium Carbonate extract is added with 2ml of dilute hydrochloric acid is until the effervescence ceases off. Then 2ml of Barium chloride solution is added	Presence of white Precipitate	Presence of sulphate	Presence of white precipitate	Presence of sulphate
2.	**Test for chloride:-** 2 ml of sodium carbonate extract is added with dilute nitric acid till the effervescence ceases off. Then 2 ml of silver nitrate solution is added	Cloudy white precipitate completely soluble in excess of ammonium hydroxide solution is obtained	Presence of chloride	Cloudy white precipitate completely soluble is excess of ammonium hydroxide solution is obtained	Presence of chloride

3.	**Test for Phosphate:-** 2ml of extract is treated with 2ml of Ammonium molibdate solution and 2ml of concentrated nitric acid	Absence of yellow precipitate	Absence of phosphate	Absence of yellow precipitate	Absence of phosphate
4.	**Test for carbonate:-** 2ml of the extract is treated with 2ml of magnesium sulphate solution	Absence of white precipitate	Absence of carbonate	Absence of white precipitate	Absence of carbonate
5.	**Test for sulphide:-** 1 gm of the substance is treated with 2ml of concentrated hydrochloric acid	Absence of Rotten egg smelling gas	Absence of sulphide	Absence of Rotten egg smelling gas	Absence of sulphide
6	**Test for Nitrate:-** 1gm of the substance is heated with copper turnings and concentrated sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas	Absence of nitrate	Absence of reddish brown gas	Absence of nitrate
7. a. b.	**Test for fluoride and oxalate :-** 2 ml of the extract is added with 2ml of dilute acetic acid and 2ml of calcium chloride solution and heated 5 drops of clear solution is added with 2ml of dilute sulphuric acid and slightly warmed. To this, 1ml of dilute potassium permanganate solution is added	Absence of white precipitate Potassium permanganate solution is decolourised	Absence of fluoride oxalate Presence of oxalate	Absence of while precipitate Potassium permanganate solution is decolourised	Absence of fluoride oxalate Presence of oxalate

8.	**Test for nitrite:-** 3 drops of the extract is placed on a filter paper on that 2 drops of acetic acid and 2 drops of benxidine solutions placed	Absence of yellow precipitate	Absence of Nitrate	Absence of yellow precipitate	Absence of Nitrate
9	**Test for Borate:-** 2 pinches of the substance is made into paste by using sulphuric acid and alcohol (95%) and introduced into the blue	Absence of Green Tinged flame	Absence of Borate	Absence of Green Tinged flame	Absence of Borate.
II 10	**TEST FOR BASIC RADICALS:** **Test for Lead:** 2ml of the extract is added with 2ml of potassium Iodide solution	Absence of yellow precipitate	Absence of Lead	Absence of yellow precipitate	Absence of Lead
11 (a)	**Test for copper:-** 1 pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the non luminous part of the flame.	Absence of Bluish green coloured flame	Absence of copper	Absence of Bluish green coloured flame	Absence of copper
b)	2ml of the extract is added with excess of ammonia solution	Absence of deep blue colour	Absence of copper	Absence of deep blue colour	Absence of copper
12	**Test of Aluminum:-** To the 2ml of extract sodium hydroxide solution is added in drops to excess	Presence of white precipitate	Presence of Aluminium	Presence of white precipitate	Presence of Aluminium

13 (a) (b)	**Test for Iron:-** To the 2ml of extract, 2ml of ammonium thiocyanate solution is added To the 2ml of extract, 2ml of ammonium thiocyanate solution and 2ml of concentrated nitric acid is added	Absence of Blood red colour Absence of red colour	Absence of Ferric iron Absence of Ferrous iron	Absence of blood red colour Presence of red colour	Absence of Ferric iron Presence of Ferrous iron
14	**Test for Zinc :-** To the 2ml of the extract sodium hydroxide solution is added in drops to excess	Presence of white precipitate	Presence of zinc	Presence of white Precipitate	Presence of zinc
15	**Test for Calcium:-** 2ml of the extract is added with 2ml of 4% ammonium oxalate solution	Presence of white precipitate	Presence of calcium	Presence of white precipitate	Presence of calcium
16	**Test for Magnesium:-** To 2m of extract , sodium hydroxide solution is added in drops of excess	Presence of white precipitate	Presence of Magnesium	Presence of white precipitate	Presence of Magnesium
17	**Test for Ammonium:-** To 2ml of extract few ml of Nessler's reagent and excess of sodium hydroxide solution are added.	Absence of Reddish brown precipitate	Absence of Ammonium	Presence of Reddish brown precipitate	Presence of Ammonium
18	**Test for Potassium:-** A pinch of substance is treated with 2ml of Sodium nitrite solution and then treated with 2ml of Cobalt nitrate in 30% glacial acetic acid	Presence of yellow precipitate	Presence of Potassium	Presence of yellow precipitate	Presence of Potassium

19	**Test for Sodium:-** 2 pinches of the substance is made into paste by using Hydrochloric acid and introduced into the blue flame	Presence of yellow colour flame	Presence of Sodium	Presence of yellow colour flame	Presence of Sodium
20	**Test for Mercury:-** 2ml of the extract is treated with 2ml of sodium Hydroxide solution.	Absence of yellow precipitate	Absence of Mercury	Absence of yellow precipitate	Absence of Mercury
21	**Test for Arsenic:-** 2ml of extract is treated with 2ml of Silver nitrate solution	Absence of yellow /brownish red precipitate	Absence of Arsenic	Absence of yellow/ brownish red precipitate	Absence of Arsenic
III 22	**MISCELLANEOUS** **Test for Starch:-** 2ml of extract is treated with weak Iodine solution	Absence of blue colour	Absence of Starch	Present of blue colour	Present of Starch
23	**Test for reducing sugar:** 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boiled for 2 minutes. The colour changes are noted	No change in colour	Absence of reducing Sugar	No change in colour	Absence of reducing Sugar
24 a) b)	**Test for alkaloids:** 2ml of the extract is treated with 2ml of potassium Iodide Solution. 2ml of the extract is treated with 2ml of picric acid	Presence of red colour Yellow color Developed	Present of Alkaloid -	Presence of red colour Yellow colour develop	Present of Alkaloid -

c)	2 ml of the extract is treated with 2ml of phosphotungstic acid	Presence of while precipitate	-	Presence of white precipitate	-
25	**Test for Tannic acid :-** 2ml of the extract is treated with 2ml of Ferric chloride solution	Absence of Blue precipitate	Absent of Tannic acid	Absence of blue precipitate	Absent of Tannic acid
26	**Test for Unsaturated compound:** To 2ml of the extract 2ml of potassium permanganate solution is added .	Potassium permanganate solution is decolourised	Presence of unsaturated compound	Potassium permanganate solution is decolourised	Presence of unsaturated compound
27	**Test for Amino Acids:** 2 drops of the extract is placed on a filter paper an dried well. After drying 1% of Ninhydrin is sprayed over the same and dried well.	No changes	Absence of Amino acid	No changes	Absence of Amino acid
27	**Test for Albumin:-** 2ml of the extract is added with 2ml of Esboch's Reagent solution	Absence of yellow precipitate	Absence of Albumin	Absence of yellow precipitate	Absence of Albumin
28.	**Test for Type of Compound:-** 2ml of the extract is added with 2ml of ferric chloride solution	Absence of red/bule/green/ violet coloures	Type of compound could not be identified	Absence of red/ bule/ green/violet coloures	Type of compound could not be identified

RESULTS:

The given samples contain.

Acid RADICALS:-

DRUG I	**DRUG II**
Sulphate	Sulphate
Chloride	Chloride
Oxalate	Oxalate

BASIC RADICALS:-

DRUG I	**DRUG II**
Aluminium	Aluminium
Zinc	Ferrous iron
Magnesium	Zinc
Calcium	Calcium
Potassium	Ammonium
Sodium	Potassium
	Sodium
	Magnesium

MISCELLANEOUS:-

DRUG I	**DRUG II**
Alkaloids	Starch
Unsaturated Compound	Alkaloids
	Unsaturated Compound

ANNEXUE IV

PHARMACOLOGICAL STUDY

ACUTE TOXICITY STUDY:

Toxicity study – up and down procedure was carried out as per the guidelines set by organization for economic co-operation and development (OECD) guidelines 423. As per “up and down” or “staircase” method using albino mice of either sex weighing between 25-30 grams were used. Different groups of animals (n-6) were received **MALLIYATHI CHOORANAM** in doses ranging from 5-4000mg/kg. One tenth of this Dose was considered as therapeutic dose i.e 400 mg/kg body weight.

As per this procedure **BHOJANA KUDORI MATHIRAI** also is doses ranging from 4 - 3000mg/kg one length of this dose was considered as therapeutic (i.e) 300mg/kg of body weight.

ANTIULCER STUDY

EFFECT OF MALLIYATHI CHOORANAM AND BHOJANA KUDORI MATHIRAI ON PYLORUS LIGATED IN ALBINO RATS.

MATERIALS AND METHODS:

ANIMALS:

Mature male **Albino rats** weighing 180 – 200g were used for this study. Animals were housed in an air conditioned room and a 10hr light; 14hr dark cycle was maintained throughout experimental period. All the animals were given standard pellet diet and water and libitum. Prior to the experiments, the rats were deprived of food for 18hr and kept in polypropylene cages to prevent coprophagy.

EXPERIMENTAL GROUPS:

Rats were divided into four groups containing six animals in each group:

Group 1: Pylorus ligated rats were given only vehicle (2% cmc)

Group 2: Pylorus ligated rats were given drug MALLIYATHI CHOORANAM (400 mg/kg , bw, p.o)

Group 3: Pylorus ligated rats were given drug BHOJANA KUDDRI MATHIRAI (300 mg/kg bw ,po)

Group 4: Pylorus ligated rats were given Ranitidine (30 mg/ kg, bw,po)

PYLORIC LIGATION METHOD:

In the method albino rats were fasted in individual cages for 24hours care was being taken to avoid coprophagy. Test drugs or reference drug or control vehicle was administered 30min prior to pyloric ligation. The abdomen was then sutured. At the end of 4hours after ligation, the animals were sacrificed with excess of anesthetic ether, and the stomach was dissected out. Gastric juice was collected and its volume was measured.

MACROSCOPIC EVALUATION OF STOMACH:

The stomachs were opened along the greater curvature, rinsed with saline to remove gastric contents and blood clots and examined by ax5 Magnifier lens to assess to the formation of ulcer. The glandular portion was then exposed and examined for ulceration. Ulcer index was determined.

Ulcer index was measured by using following formula.

$$\mathbf{UI = UN + US + UP \times 10^{-1}}$$

Where

UI – Ulcer Index,

NI – Mean of ulcer number,

US – Mean of ulcer score

UP – Ulcer probability (incidence %) for each group

RESULTS:

1. Effect of **Malliyathi chooranam** and **Bhojana Kudori Mathirai** on total and free acidity gastric volume and ulcer index.

Groups	**Total acidity (mEq/l)**	**Free acidity (mEq/l)**	**Gastric Volume (ml /100mg)**	**P^H**
Ligation control	40.85 ± 3.08	11.02 ± 1.18	2.27 ± 0.02	1.14 ± 0.01
Ranitidine (30mg/kg)	37.48 ± 2.57*	8.05 ± 1.16	3.64 ± 0.03 *	1.24 ± 0.03*
Malliyathi Chooranam (400mg/kg)	44.52 ± 5.51*	17.60 ± 0.88*	2.94 ± 0.02 *	1.29 ± 0.02**
Bhojana Kudori Mathirai (300mg/kg)	41.11 ± 4.85	12.00 ± 1.03	2.34 ± 0.02*	1.16 ± 0.01**

Values are mean ± SEM ; Significantly different from control at * P Value <0.05, ** P value <0.01.

2. Effects of Oral administration of **Malliyathi chooranam** and **Bhojana Kudori Mathirai** on Gastric Lesions in Pylorus ligated rats.

Groups	Ulcer Scoring	Ulcer index	% inhibition
Control (saline)	2.08 ± 0.3	17.2	-
Ranitidine (30mg/kg)	1.25 ± 0.3**	12.6	26.6
Malliyathi Chooranam (400mg/kg)	1.60 ± 0.3 *	15.8	8.13
Bhojana Kudori Mathirai (300mg/kg)	1.82 ± 0.3*	15.5	12.5

SUMMARY AND CONCLUSION:

Results of this study establish a cytoprotective action of Both trial medicines as it was found effective against pyloric ligated model. It was confirmed that the both trial medicines significantly reduced the extent of ulceration in pylorus ligated rats without affecting the gastric secretion or Pepsin Activity.

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CASE SHEET PROFORMA

POST GRADUATE DEPARTMENT, MARUTHUVAM [BRANCH-I]

GOVT. SIDDHA MEDICAL COLLEGE & HOSPITAL, CHENNAI – 106.

ERI GUNMAM: (Peptic Ulcer)

I.P. NO	:	OCCUPATION	:
WARD NO	:	INCOME	:
BED NO	:	NATIONALITY	:
NAME	:	RELIGION	:
AGE	:	DATE OF ADMISSION	:
SEX	:	DATE OF DISCHARGE	:
		TOTAL NO. OF DAYS TREATED	:
ADDRESS	:	DIAGNOSIS	:
		MEDICAL OFFICER	:

COMPLAINTS AND DURATION

HISTORY OF PRESENT ILLNESS

HISTORY OF PAST ILLNESS

PERSONAL HISTORY & HABITS

FAMILY HISTORY

GENERAL EXAMINATION:-

- ❖ Pulse Rate
- ❖ Temperature
- ❖ Respiratory rate
- ❖ Heart Rate
- ❖ Blood Pressure

- Consciousness
- Naurishment
- Decubitus
- Anaemia
- Jaundice
- Cyanosis
- Clubbing
- Lymph adenopathy
- Oedema
- Jugular venous Pulsations
- Engorged Veins
- Miscellaneous

SIDDHA ASPECTS:-

Nilam (Places)

- Kurinchi (Hill Area)
- Mullai (Forest Area)
- Marutham (Fertile Area)
- Neithal (Sea Area)
- Paalai (Desert Area)

Paruva Kaalam (Seasons)

- Kaar (Aavani – Puratasi) Aug – Sept.
- Koothir (Aypasi – Karthigai) Oct - Nov.
- Munpani (Maargazhi – Thai) Dec - Jan.
- Pinpani (Massi – Panguni) Feb - Mar.
- Elavenil (Chithirai – Vaikasi) Apr - May.
- Mudhuvenil (Aani – Aadi) Jun - July.

Yaakai (Udalnilai)

- Vatham
- Pitham
- Kapham
- Kalappu

Mukkunam:

1. Sathuva Gunam
2. Raasatha Gunam
3. Thamo gunam

Iymporigal (Sensory organs)

- Mei (Sensation)
- Vaai (Taste)
- Kann (Vision)
- Mooku (Smell)
- Sevi (Hearing)

Kanmenthiriyam / Kanmavidayam Kai (Koduthal)

- Kaal (Nadathal)
- Vaai (Pesel)
- Eruvai (Kazhithal)
- Karuvai (Aanandhithal)

Mummalam

- Malam
- Moothiram
- Viyarvai

Kosam:

- Annamaya Kosam (Paru Udambu)
  (Yelu Udal Thaathukkal)
- Pranamaya Kosam (Vali Udambu)
  (Pranan + Kanmenthiriyam)
- Manomaya Kosam (Mana Udambu)
  (Manam + Gnanenthiriyam)
- Gnanamaya Kosam (Arivu Udambu)
  (Puththi + Gnanenthiriyam)
- Ananthamaya Kosam (Inba Udambu)
  (Pranan + suzhuthi)

Pira Urupukalin Nilai

- Irudhayam
- Puppusam
- Eraippai
- Kalleral
- Mannerral
- Kudal – Sirukudal, Perungudal
- Siruneeragam
- Siruneerpai
- Moolai
- Karuppai

Uyir Thathukkal

Vatham:

- Pranan
- Abanan
- Viyanan
- Udhanan

- Samanan
- Naagan
- Koorman
- Kirukaran
- Devadathan
- Dhananjayan.

Pitham:

- Analagam
- Ranjagam
- Saadhagam
- Aalosagam
- Prasagam

Kapham:

- Avalambagam
- Kledagam
- Podhagam
- Tharpagam
- Santhigam

Udal Thathukkal

- Saaram
- Senneer
- Oon
- Kozhuppu
- Enbu
- Moolai
- Sukkilam / Suronitham

Envagai Thervu

- Naa
- Niram
- Mozhi
- Vizhi
- Sparisam
- Malam
    a. Niram
    b. Nurai
    c. Erugal
    d. Ellagal.
- Moothiram
    1. Neerukuli
        a. Niram
        b. Edai
        c. Manam
        d. Nurai

e. Enjal

2. Neikkuri

- Naadi

MODERN ASPECT

EXAMINATION OF GASTRO INTESTINAL SYSTEM

Symptoms	Before Treatment	After Treatment In Weeks			
		1st	2nd	3rd	4th
1. PAINS – RELATED TO FOOD					
A. Epigastric discomfort:					
a. Before meals					
b. 1 to 2 hours after meals					
c. 2 to 4 hours after meals					
d. Constant					
B. Pain occasional:					
a. Before meals					
b. 1 to 2 hours after meals					
c. 2 to 4 hours after meals					
d. Constant					
C. Pain burning:					
a. Before meals					
b. 1 to 2 hours after meals					
c. 2 to 4 hours after meals					
d. Constant					
D. Pain radiation:					
a. No radiation					
b. Left Shoulder					
c. Back					
d. Sides of Chest					
E. Pain nocturnal:					
a. Present					
b. Absent					
F. Pain relieved by:					
a. Food					
b. Antacids					
c. Bed rest					
d. Siddha drug					
e. Not Relieved by any of the above					
G. Nausea					
H. Vomiting					
a. frequent					
b. Occasionally					

c. Stained with blood					
II. Heart burn					
a. Occasional					
b. Constant					
c. Before meals					
III. Excessive Salivation					
a. Occasional					
b. Often					
c. Constant					
IV Appetite					
a. Very poor					
b. Moderate					
c. Normal					
d. Voracious					
Sings: Examination of the abdomen.					
1. Tenderness epigastrium:					
a. Present					
b. absent					
2. Pointing signs					
a. Present					
b. Absent					
3. Rigidity of rectus Abdominous					
a. Present					
b. Absent					
4. Visible Peristalsis (VGP)					
a. Present					
b. Absent					
5. Palppable mass:					
a. Present					
b. Absent					

Other System :

1. Cardio Vascular System
2. Respiratory System
3. Central Nervous System
4. Genito Urinary System

INVESTIGATIONS:

1. Urine : Albumin
   Sugar
   Deposit

2. Motion : Ova
Cyst
Occult blood

3. Blood : TC
DC
ESR
HB
Blood Sugar (F/PP/R)
Urea
Grouping
Serum Cholesterol
Serum Amylase

4. X-ray – Barium Meal Series
5. Endoscpoy

CASE SUMMARY

FINAL DIAGNOSIS

MEDICINE:

1. Malliyathi Chooranam - 1gm BD with hot water (AF)
2. Bhojana Kudori Mathirai - 1 tab, OD with hot water (AF)

MEDICAL ADVICE:

OTHER SIGNS AND SYMPTOMS

Sl.No	Symptoms & Signs	Before Treatment	During Treatment	After Treatment

1.	Pain in the epigastric region			
2.	Heart Burn			
3.	Loss of appetite			
4.	Eructation			
5.	Excessive Salivation			
6.	Nausea and Vomiting			
7.	Borborygmus			
8.	Constipation			
9.	Diarrhoea			
10.	Haematamesis			
11.	Melaena			
12.	Emaciation			
13.	Bloating			
14.	Sweating			
15.	Giddiness			

DISCHARGE CASE SHEET

POST GRADUATE DEPARTMENT. POTHU MARUTHUVAM [BRANCH I]

GOVT. SIDDHA MEDICAL; COLLEGE & HOSPITAL, CHENNAI – 106.

ERI GUNMAM (PEPTIC ULCER)

I.P. NO	:	OCCUPATION	:
WARD NO	:	INCOME	:
BED NO	:	NATIONALITY	:
NAME	:	RELIGION	:
AGE	:	DATE OF ADMISSION	:
SEX	:	DATE OF DISCHARGE	:
		TOTAL NO. OF DAYS TREATED	:
ADDRESS	:	DIAGNOSIS	:
		MEDICAL OFFICER	:

S.No.	Clinical Features	1st Day	1st week	2nd week	3rd week	4th week
1.	Pain in the epigastric region					
2.	Nauses and Vomiting					
3.	Excessive Salivation					
4.	Heart Burn					
5.	Loss of appetite					
6.	Eructation					
7.	Borborygmus					
8.	Constipation					
9.	Diarrhoea					
10.	Haematamisis					
11.	Melaena					
12.	Emaciation					
13.	Bloating					
14.	Sweating					
15.	Giddiness					

O.P. SLIP ON ERIGUNMAM

POST GRADUATE DEPARTMENT. POTHU MARUTHUVAM [BRANCH I]

GOVT. SIDDHA MEDICAL; COLLEGE & HOSIPTAL, CHENNAI – 106.

ERI GUNMAM (PEPTIC ULCER)

O.P. NO	:	Blood Pressure	:
Name	:	Pulse Rate	:
Age / Sex	:	Temperature	:
Occupation	:	Respiration Rate	:
Income	:	Heart Rate	:
Nationality	:	Naadi	:
Religion	:	Medical officer	:
Address	:		

S.No.	Clinical Features	1st Day	1st week	2nd week	3rd week	4th week
1.	Pain in the epigastric region					
2.	Nauses and Vomiting					
3.	Belching					
4.	Heart Burn					
5.	Loss of appetite					
6.	Eructation					
7.	Borborygmus					
8.	Constipation					
9.	Diarrhoea					
10.	Haematamesis					
11.	Melaena					
12.	Emaciation					
13.	Blotting					
14.	Sweating					
15.	Excessive Salivation					
16.	Giddiness					

Envagai Thervu

1. Naa
2. Niram
3. Mozhi

4. Vizhi
5. Sparism
6. Malam
   a. Niram
   b. Nurai
   c. Erugal
   d. Ellagal
7. Moothiram
   1. Neerkuri
      a. Niram
      b. Edai
      c. Manam
      d. Nurai
      e. Enjal
   2. Neikkuri
8. Naadi

Laboratory Investigation :-

Investigations	Before Treatment	After Treatment
Urine : Albumin Sugar Deposits Motion Occult blood Ova /Cyst Blood TC DC ESR HB Bl – Sugar (F/PP/R) Bl – Urea Serum – Cholesterol Grouping Serum Amylase X-ray – Barium Meal Endoscopy		

Medicines:-

1. Malliyathi Chooranam – 1gm BD with hot water, AF
2. Bhojana Kudori Mathirai – 1 tab OD with hot water, AF

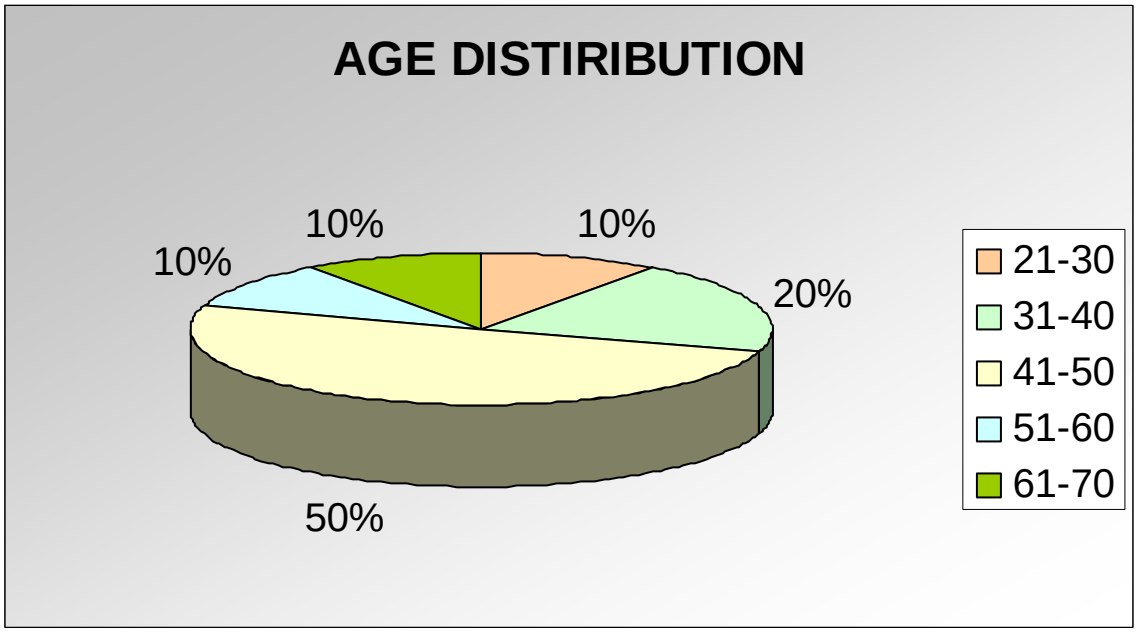
OBSERVATION AND RESULTS

The clinical study was carried out in twenty patients with signs and symptoms of **Erigunmam** in the I.p of Government siddha medical college, Chennai – 106, attached to Arignar Anna Hospital, during 2006 to 2008 were analyzed. The observation were made and tabulated with regard to the following features, 20 cases were selected and treated in the out patient department separately.

- Age Distribution
- Sex Distribution
- Socio- Economic status
- Occupation Reference
- Blood grouping
- Personal Habits and Diet Reference
- Kaalam Distribution
- Paruvakkaalam Distribution
- Thinai Reference
- Reference to Duration of Illness
- Poripulangal reference
- Reference to Mukkutram
    - Affected vatham
    - Affected Pitham
    - Affected Kabham
- Ezhu Udalkattugal Reference
- Ennvagai Thervu Reference
- Neikuri Reference
- Clinical Features Before Treatment
- Clinical features After Treatment
- Overall Results

AGE DISTRIBUTION :

S.No	Age Group	No.of.Cases	Percentage (%)
1.	21-30	2	10
2.	31-40	4	20
3.	41-50	10	50
4.	51-60	2	10
5.	61-70	2	10



INFERENCE :

From Selected 20 Cases

2 Patients (10%) were between 21- 30

4 Patients (20%) were between 31-40

10 Patients (50%) were between 41-50

2 Patients (10%) were between 51-60 and

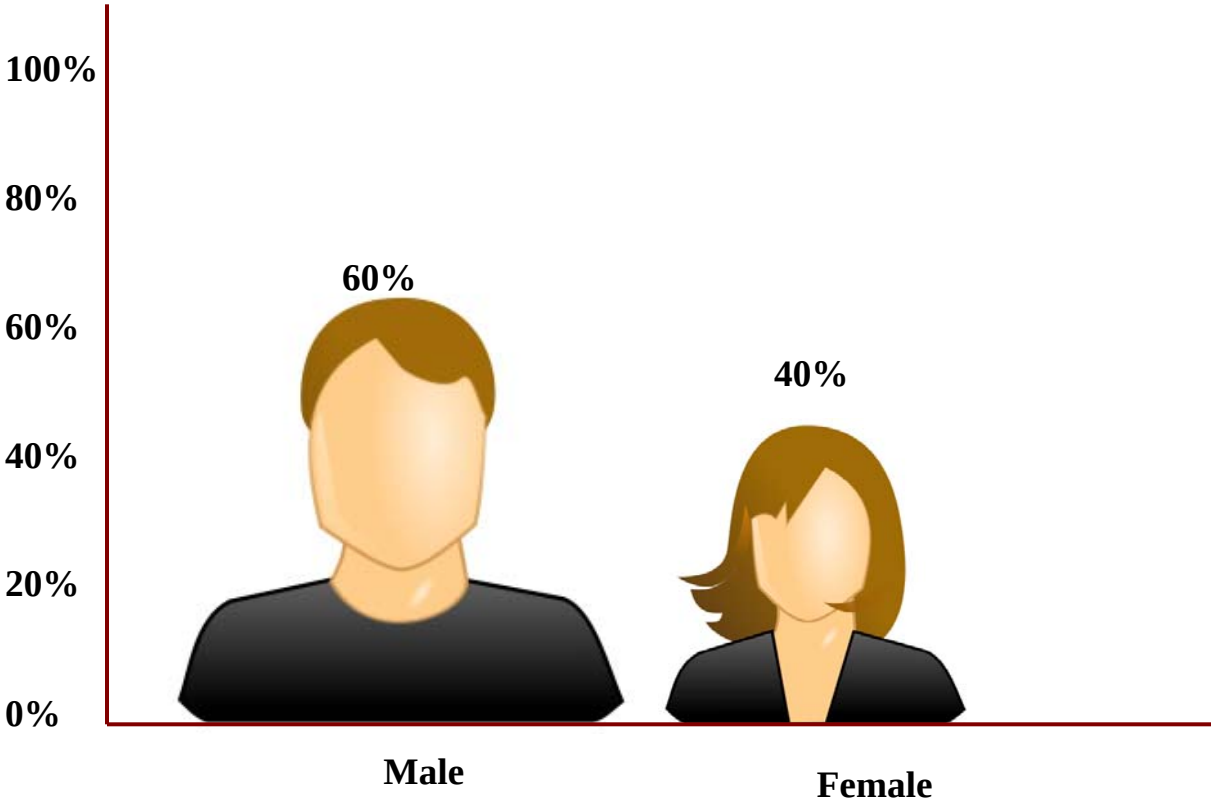
2 Patients (10%) were between 61-70 age groups

It is seen that the maximum incidence of the disease lies in the age group between 41 to 50 yrs (50%)

SEX DISTRIBUTION:

S.No	Sex	No.of.Cases	Percentage (%)
1.	Male	12	60
2.	Female	8	40

SEX DISTRIBUTION



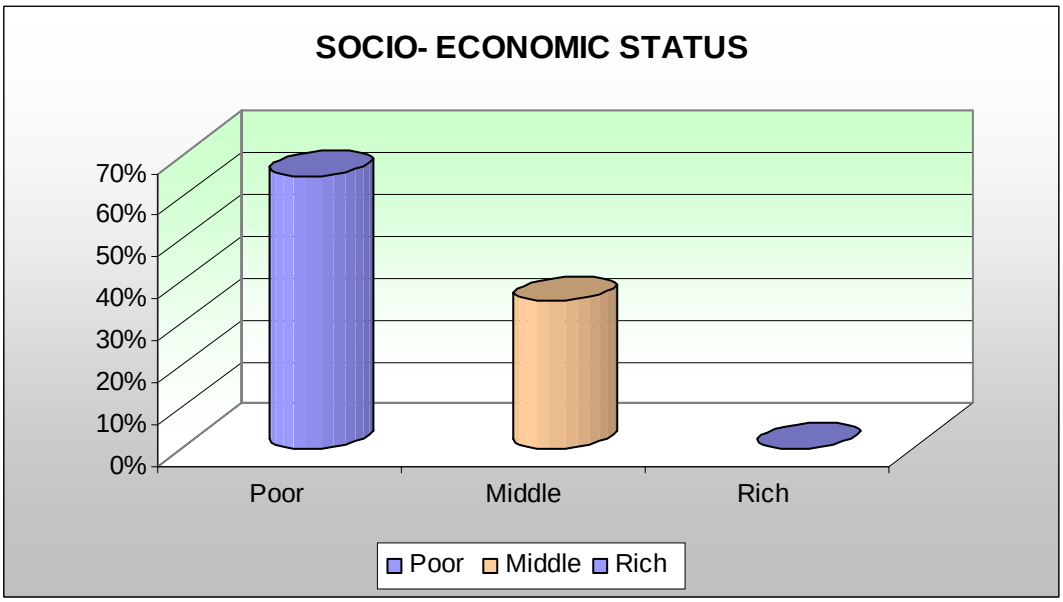
INFERENCE

Out of 20 Patients 12 cases(60%) were male and 8 cases (40%), were female.

SOCIO- ECONOMIC STATUS:

S.No	Socio – Economic Status	No.of.Cases	Percentage (%)

1.	Poor	13	65
2.	Middle	7	35
3.	Rich	0	0

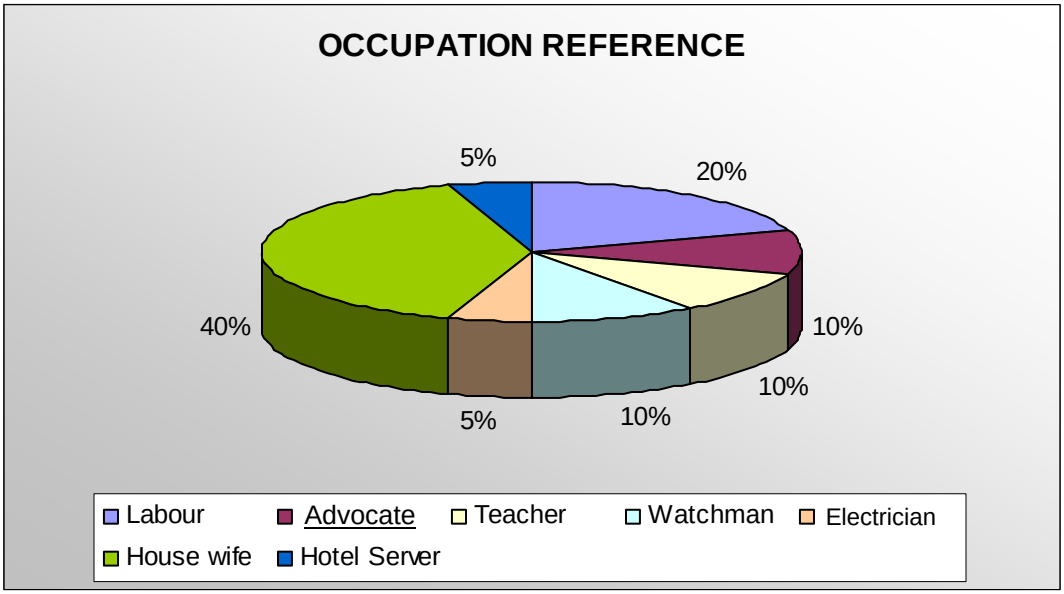


INFERENCE : Regarding socio Economic status 13 Patients (65%) Comes under poor category and 7 patients (35%) comes under middle class category.

OCCUPATION REFERENCE:

S.No	Occupation	No.of.Cases	Percentage (%)
1.	Labour	4	20
2.	Advocate	2	10
3.	Teacher	2	10

4.	Watchman	2	10
5.	Electrician	1	5
6.	House wife	8	40
7.	Hotel Server	1	5



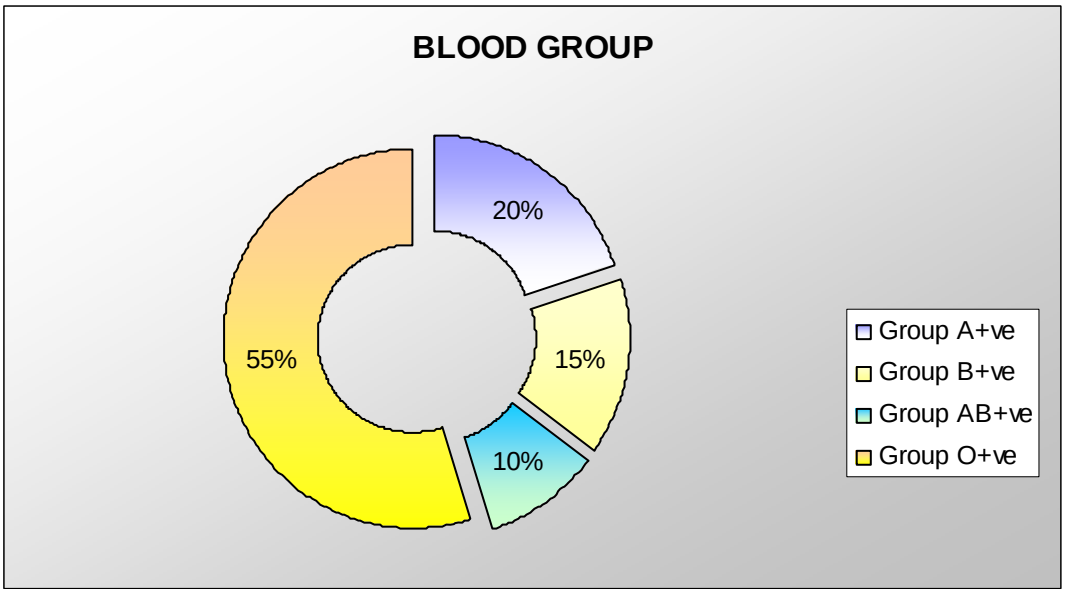
Inference:

Out of 20 Patients, 4 Patient (20%) were labour, each 2 patients (10%) were Advocate, Teacher and Watchman, each 1 patient (5%) were electrician and hotel server and 8 patients (40%) were House wife.

BLOOD GROUP

S.No	Blood Group	No.of.Cases	Percentage (%)
1.	Group A+ve	4	20
2.	Group B+ve	3	15

3.	Group AB+ve	2	10
4.	Group O+ve	11	55



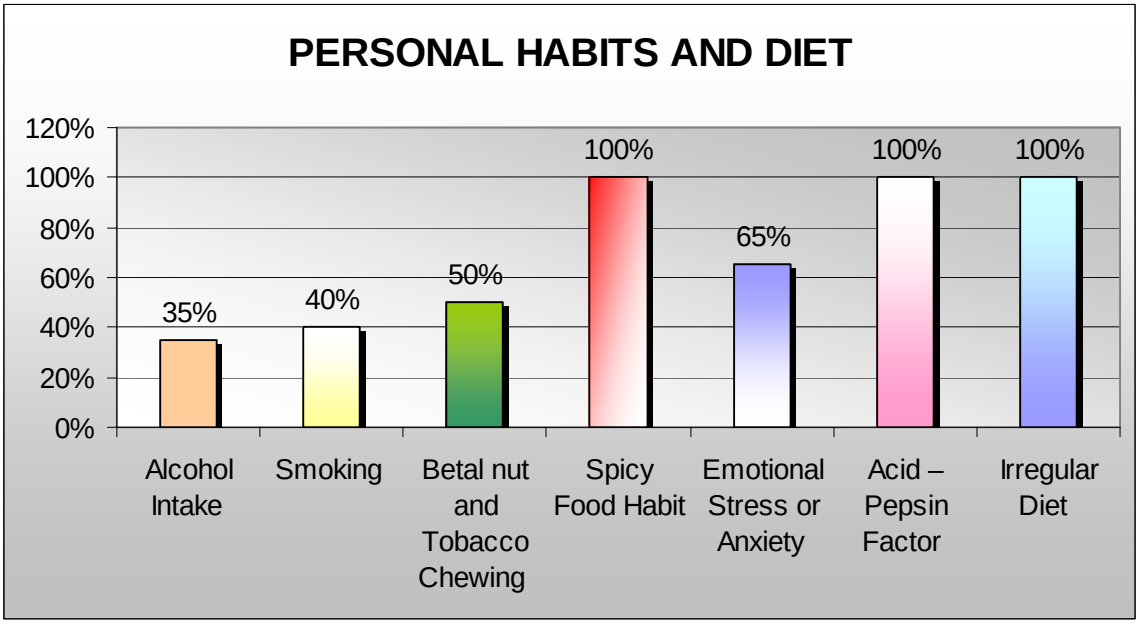
INFERENCE :

From Selected 20 patients, 4 Patients (20%) were Group A+ve, 3 patients (15%) were Group B+ve, 2 Patients (10%) were Group AB+ve, and 11 Patients (55%) were Group O+ve.

PERSONAL HABITS AND DIET REFERENCE :

S.No	Personal Habits and Diet	No.of.Cases	Percentage (%)
1.	Alcohol Intake	7	35
2.	Smoking	8	40
3.	Betal nut and Tobacco Chewing	10	50
4.	Spicy Food Habit	20	100
5.	Emotional Stress or Anxiety	13	65

6.	Acid – Pepsin Factor	20	100
7.	Irregular Diet	20	100

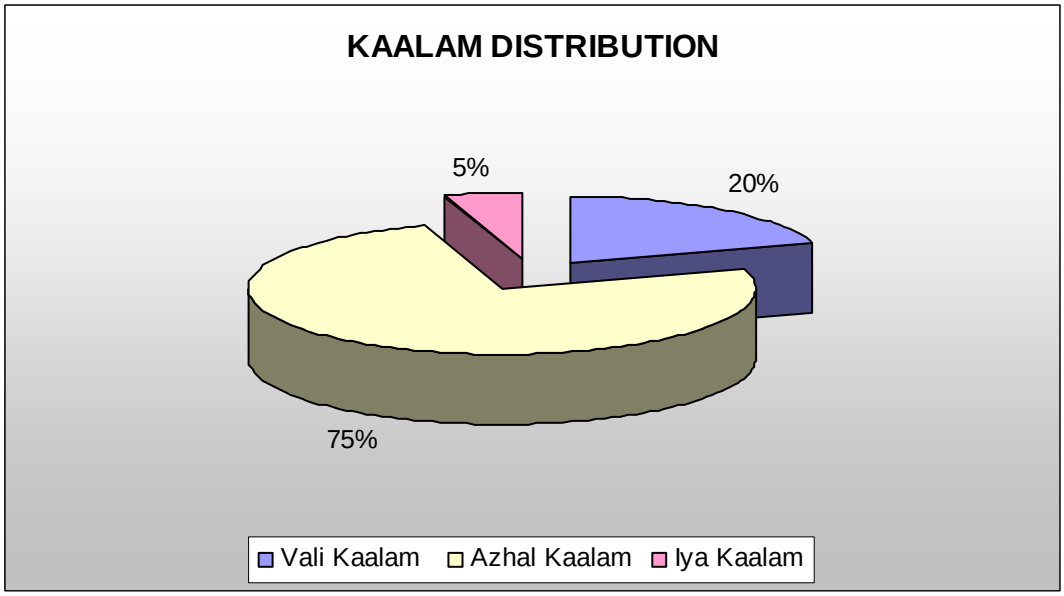


INFERENCE:

Regarding Personal Habits and Diet 7 Patients (35%) were Alcohol intaker, 8 Patients (40%) were Smokers, 10 Patients (50%) were Betal nut and Tobacco Chewer, 20 Patients (100%) were Spicy Food intaker, 13 Patients (65%) were Emotional Stress or Anxiety conditions, 20 patients were Acid – Pepsin Factor Hyper and 20 patients were (100%) Irregular Food intaker.

KAALAM DISTRIBUTION:

S.No	Kaalam	No.of.Cases	Percentage (%)
1.	Vali Kaalam (Upto 33 1/3 Yrs)	4	20
2.	Azhal Kaalam (33 1/3 – 66 2/6 Yrs)	15	75
3.	Iya Kaalam (66 2/6 - and above)	1	5



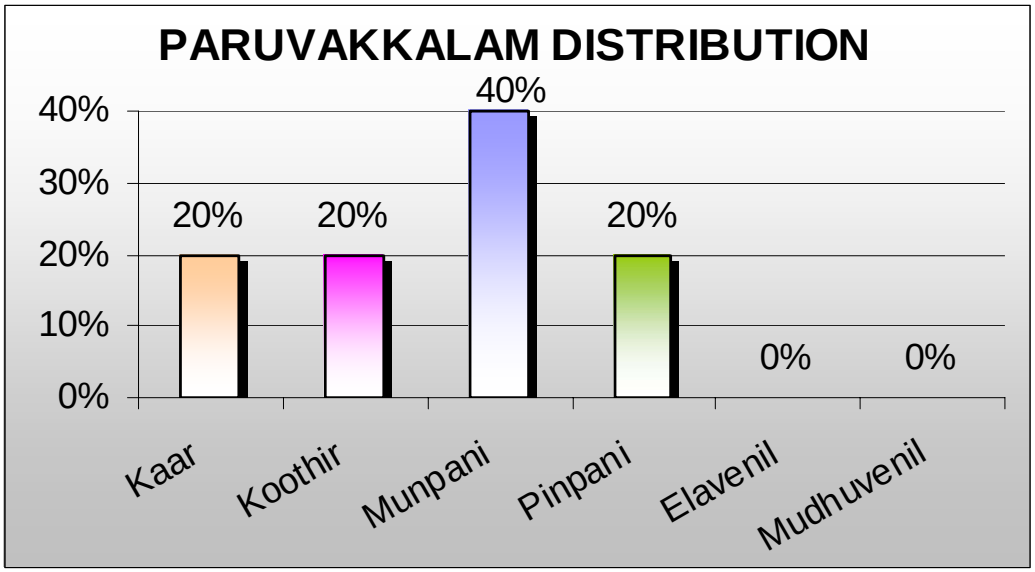
INFERENCE:

Out of 20 Patients 4 Patients (20%) comes under Vali Kaalam, 15 Patients (75%) comes under Azhal Kaalam and 1 Patient(5%) comes under Iya Kaalam.

PARUVAKAALAM DISTRIBUTION:

S.No	Paruvakaalam	Month	No.of.Cases	Percentage (%)
1.	Kaar	Aavani – Puratasi (Mid Aug- Mid Oct)	4	20%
2.	Koothir	Iyppasi – Karthigai (Mid Oct – Mid Dec)	4	20%
3.	Munpani	Maarghazi – Thai	8	40%

		(Mid Dec – Mid Feb)		
4.	Pinpani	Maasi – Panguni (Mid Feb – Mid Apr)	4	20%
5.	Elavenil	Chithirai – Vaikasi (Mid Apr – Mid Jun)	0	0%
6.	Mudhuvenil	Aani – Aadi (Mid Jun – Mid Aug)	0	0%



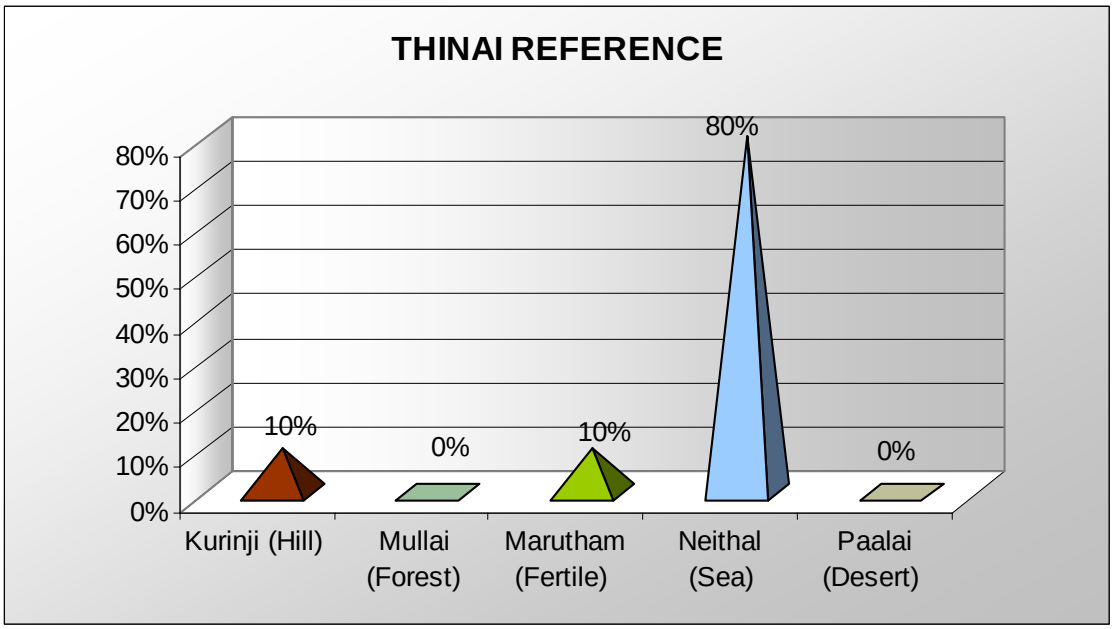
INFERENCE :

From Selected 20 Patients, 4 Patients (20%) comes under Kaar Kaalam, 4 Patients (20%) comes under Koothir Kaalam, 8 Patients (40%) Comes Under Munpani and 4 patients (20%) comes under Pinpani.

THINAI REFERENCE :

S.No	Thinai	No.of.Cases	Percentage (%)
1.	Kurinji (Hill)	2	10
2.	Mullai (Forest)	0	0
3.	Marutham (Fertile)	2	10

4.	Neithal (Sea)	16	80
5.	Paalai (Desert)	0	0

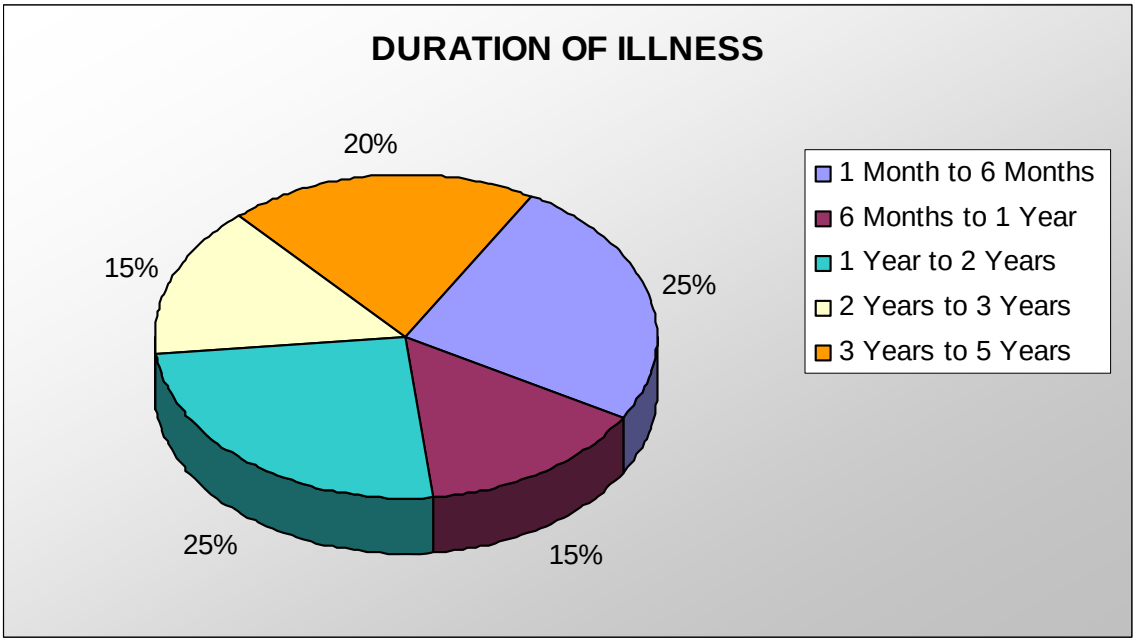


INFERENCE:

Out of 20 Patients 2 Patients (10%) came from Kurinji Region, 2 Patients (10%) Came from Marutham and 16 Patients (80%) came from Neithal region.

REFERENCE TO DURATION OF ILLNESS :

S.No	Duration of Illness	No.of.Cases	Percentage (%)
1.	1 Month to 6 Months	5	25
2.	6 Months to 1 Year	3	15
3.	1 Year to 2 Years	5	25
4.	2 Years to 3 Years	3	15
5.	3 Years to 5 Years	4	20

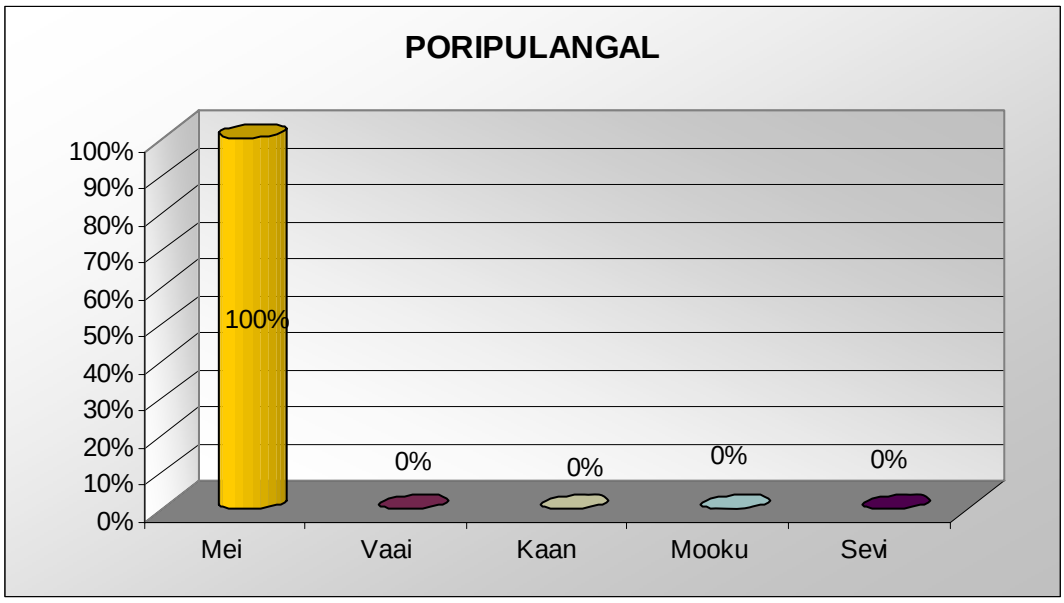


INFERENCE:

From Selected 20 Patients, 5 Patients (25%) comes under Between 1 Month to 6 Month , 3 Patients (15%) comes under between 6 months to 1 Year, 5 Patients (25%) comes under between 1 year to 2 year, 3 Patients (15%) comes under between 2 years to 3 years and 4 patients (20%) were comes under Between 3 to 5 years.

PORIPULANGAL REFERENCE

S.No	Poripulangal	No.of.Cases	Percentage (%)
1.	Mei	20	100
2.	Vaai	0	0
3.	Kaan	0	0
4.	Mooku	0	0
5.	Sevi	0	0



INFERENCE :

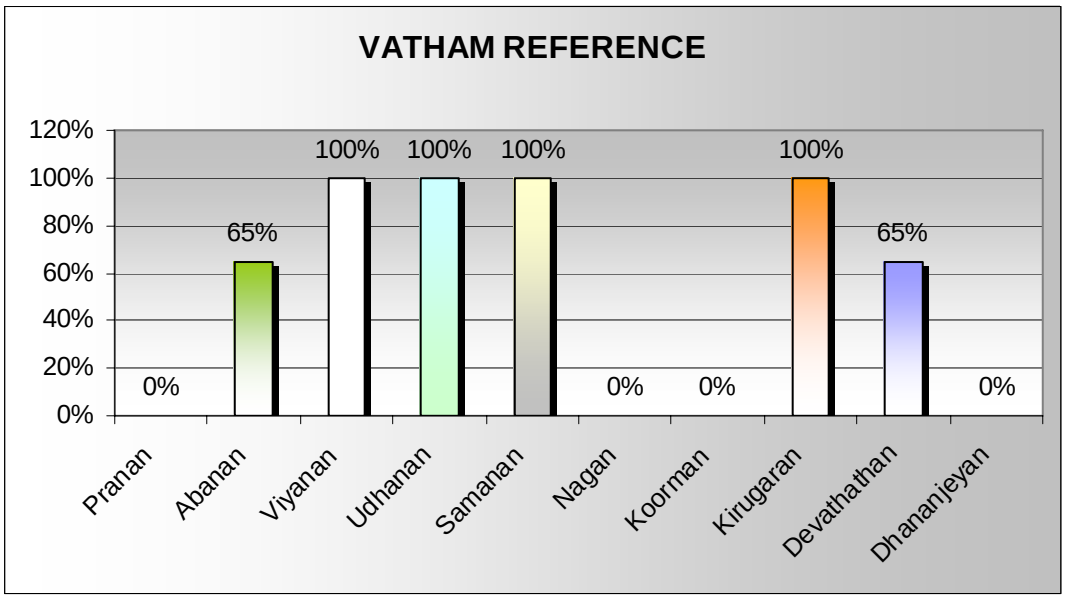
Out of 20 cases, Mei was affected in 20 Cases (100%).

REFERENCE: TO MUKKUTRAM :

(a) Affected Vatham:

S.No	Classification of Vatham	No.of.Cases	Percentage (%)
1.	Pranan	0	0
2.	Abanan	13	65
3.	Viyanan	20	100
4.	Udhanan	20	100
5.	Samanan	20	100

6.	Nagan	0	0
7.	Koorman	0	0
8.	Kirugaran	20	100
9.	Devathathan	13	65
10.	Dhananjeyan	0	0

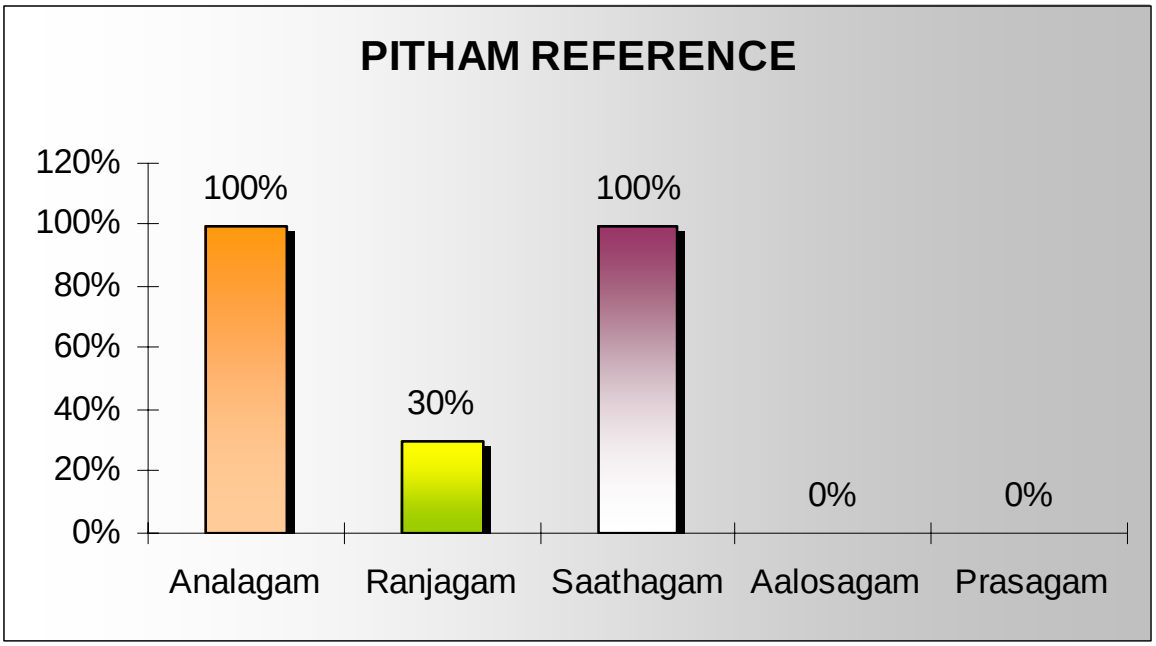


INFERENCE :

Form the Selected 20 Patients, Abanan was affected in 13 Patients (65%), Viyanan in 20 patients (100%), Udhanan in 20 patients (100%), Samanan in 20 Patients (100%), Kirugaran in 20 Patients (100%) and Devathathan was affected in 13 patients (65%).

(b) Affected Pitham

S.No	Classification of Pitham	No.of.Cases	Percentage (%)
1.	Analagam	20	100
2.	Ranjagam	6	30
3.	Saathagam	20	100
4.	Aalosagam	0	0
5.	Prasagam	0	0

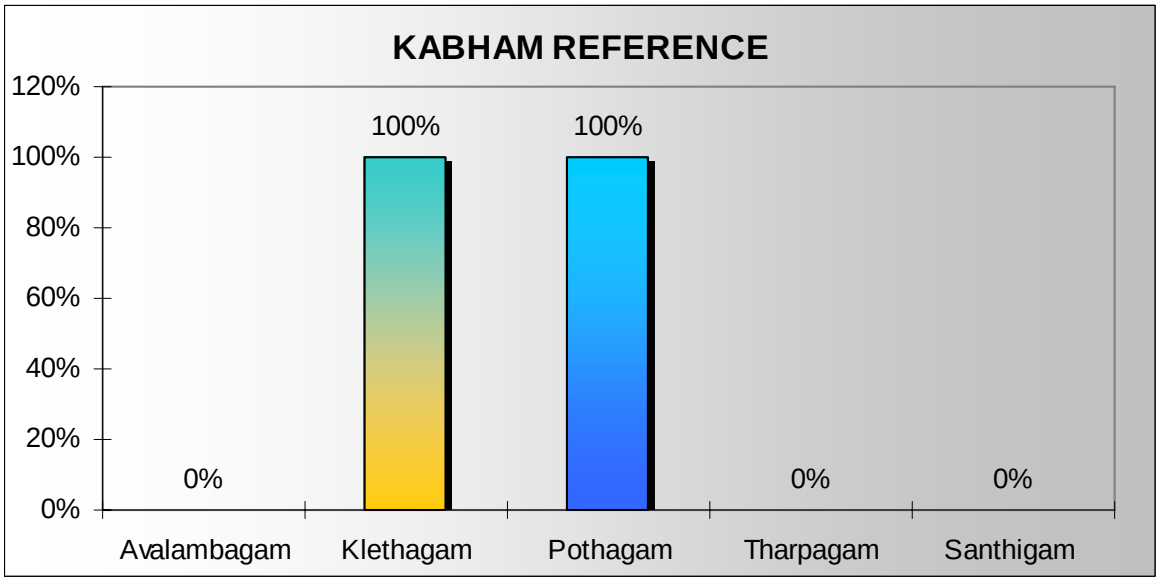


INFERENCE :

Out of 20 Cases, Analagam was affected in 20 Patients (100%), Ranjagam in 6 patients (30%) and Saathagam was affected in 20 Patients (100%).

(c). Affected Kabham

S.No	Classification of Kabham	No.of.Cases	Percentage (%)
1.	Avalambagam	0	0
2.	Klethagam	20	100
3.	Pothagam	20	100
4.	Tharpagam	0	0
5.	Santhigam	0	0



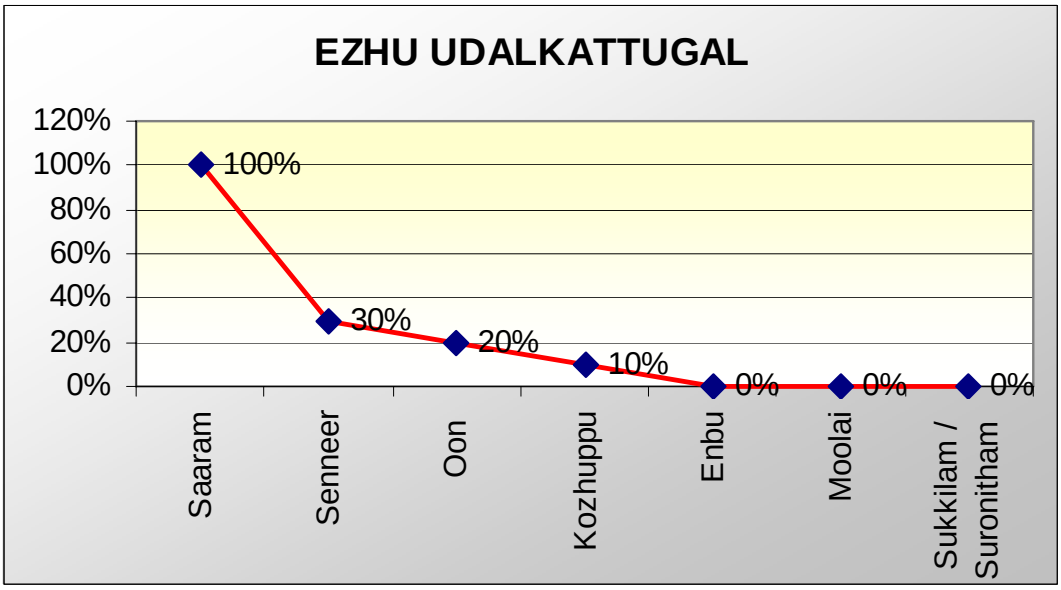
INFERENCE:

From the Selected 20 Patients, Klethagam was affected in 20 Patients (100%) and Pothagam was affected in 20 Patients(100%).

EZHU UDALKATTUGAL REFERENCE

S.No	Ezhu Udalkattugal	No.of.Cases	Percentage (%)
1.	Saaram	20	100
2.	Senneer	6	30
3.	Oon	4	20
4.	Kozhuppu	2	10
5.	Enbu	0	0
6.	Moolai	0	0

7.	Sukkilam / Suronitham	0	0



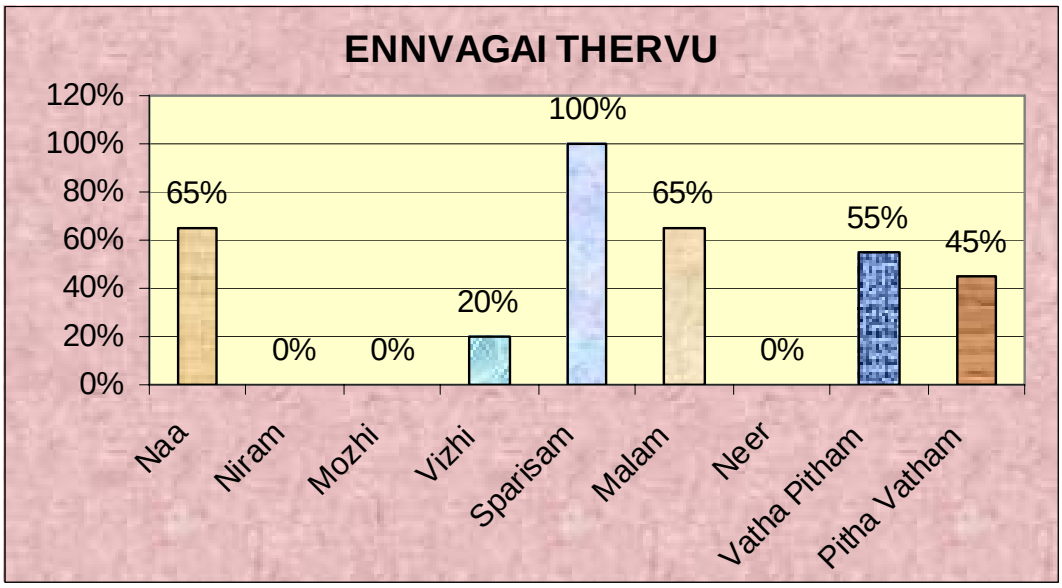
INFERENCE

Out of 20 Cases, Saaram gets affected in 20 Patients (100%), Senneer in 6 Patients (30%), Oon in 4 Patients (20%) and Kozhuppu gets affected in 2 Patients (10%).

ENNVAGAI THERVU REFERENCE

S.No	Ennvagai Thervu	No.of.Cases	Percentage (%)
1.	Naa	13	65
2.	Niram	0	0
3.	Mozhi	0	0
4.	Vizhi	4	20
5.	Sparism	20	100
6.	Malam	13	65
7.	Neer	0	0

8.	**Naadi**		
	Vatha Pitham	11	55
	Pitha Vatham	9	45



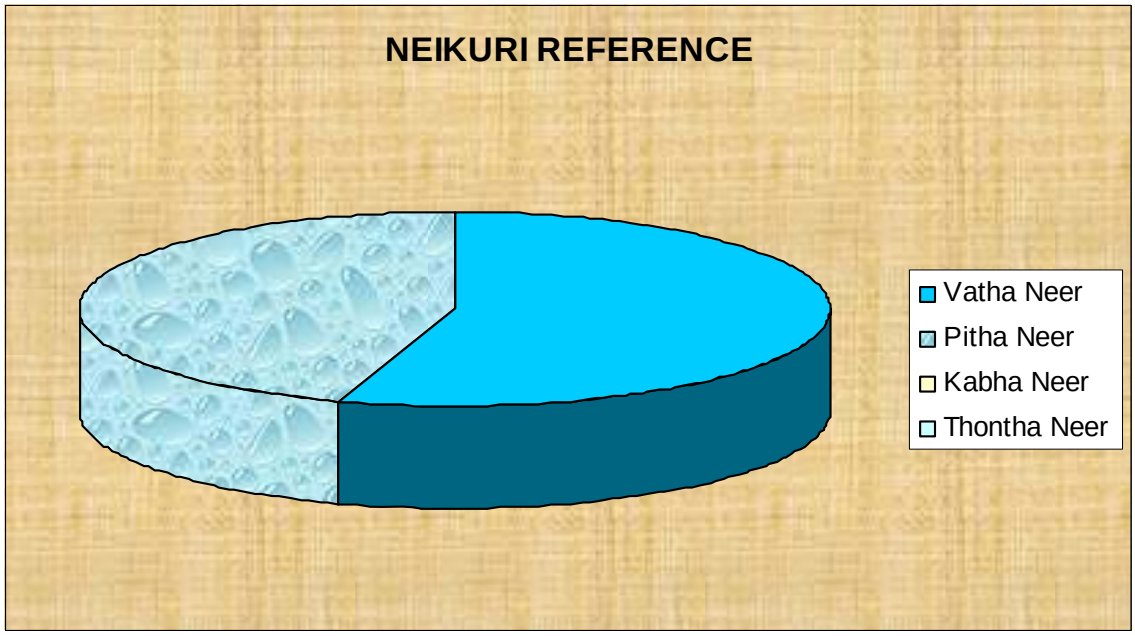
INFERENCE :

Regarding Ennvagai Thervu, Naa (Coated) was affected in 13 Patients (65%), Vizhi (Paler) in 4 Patients (20%), Sparism (Pain) in 20 Patients (100%), Malam (Constipation and Diarrhoea) in 13 Patients (65%).

Considering the Naadi 11 Patients (55%) had Vatha Pitham and 9 Patients (45%) had Pitha Vatham.

NEIKURI REFERENCE

S.No	Neikuri	Character of Urine	No.of.Cases	Percentage (%)
1.	Vatha Neer	Spreads like snake	11	55
2.	Pitha Neer	Spreads like ring	9	45
3.	Kabha Neer	Floats like a pearl	0	0
4.	Thontha Neer	Mixture of the above	0	0



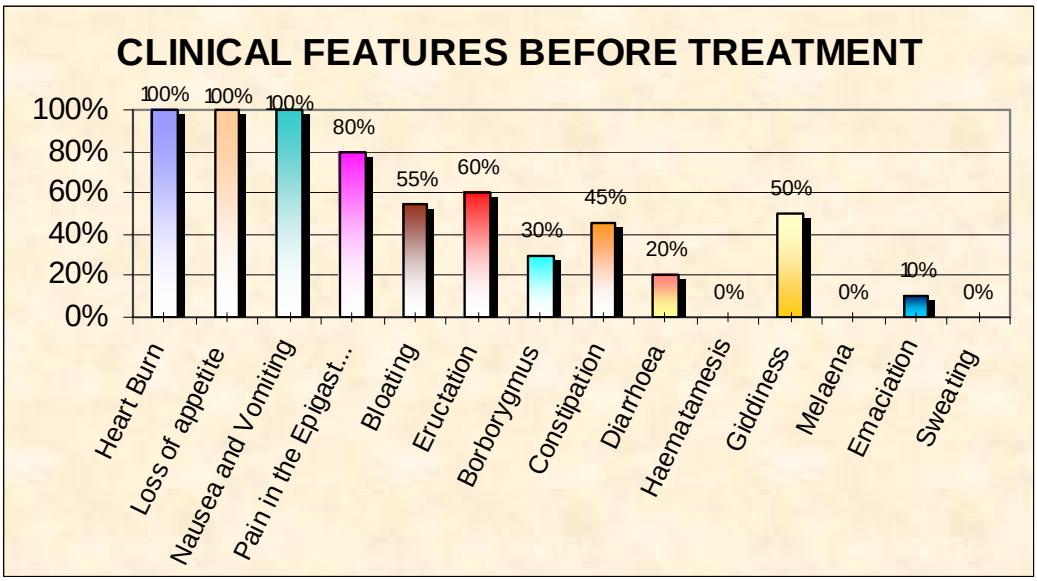
INFERENCE :

Regarding Neikuri, 11 Patients (55%) had Vatha Neer and 9 Patients (45%) had Pitha Neer.

CLINICAL FEATURES BEFORE TREATMENT

S.No	Signs and Symptoms	No.of.Cases	Percentage (%)
1.	Heart Burn	20	100
2.	Loss of appetite	20	100
3.	Nausea and Vomiting	20	100
4.	Pain in the Epigastric Region	16	80
5.	Bloating	11	55
6.	Eructation	12	60
7.	Borborygmus	6	30
8.	Constipation	9	45
9.	Diarrhoea	4	20
10.	Haematamesis	0	0
11.	Giddiness	10	50
12.	Melaena	0	0
13.	Emaciation	2	10

14.	Sweating	0	0

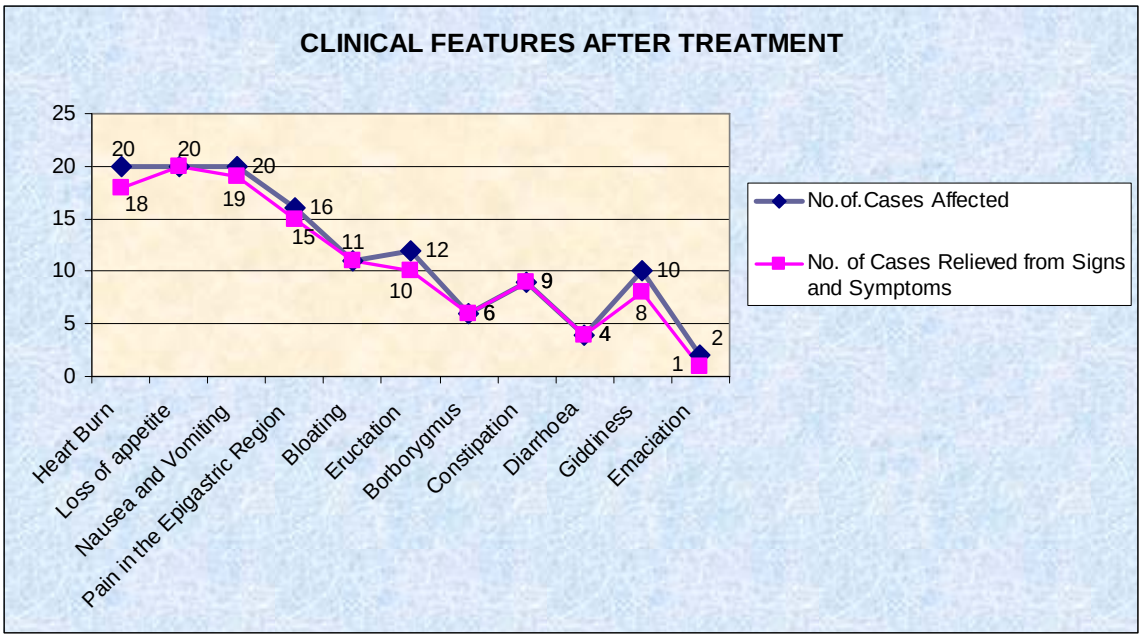


INFERENCE:

From the Selected 20 Patients, Heart Burn, Loss of Appetite, Nausea and Vomiting were present in all the 20 patients (100%), Pain in the Epigastric Region was present in 16 Patients (80%), Bloating in 11 Patients (55%), Eructation in 12 Patients (60%), Borborygmus in 6 Patients (30%), Constipation in 9 Patients (45%), Diarrhoea in 4 Patients (20%), Giddiness in 10 Patients (50%) and Emaciation in 2 Patients (10%).

CLINICAL FEATURES AFTER TREATMENT

S.No	Signs and Symptoms	No.of.Cases Affected	No. of Cases Relieved from Signs and Symptoms	Percentage (%)
1.	Heart Burn	20	18	90
2.	Loss of appetite	20	20	100
3.	Nausea and Vomiting	20	19	95
4.	Pain in the Epigastric Region	16	15	93.75
5.	Bloating	11	11	100
6.	Eructation	12	10	83.33
7.	Borborygmus	6	6	100
8.	Constipation	9	9	100
9.	Diarrhoea	4	4	100
10.	Giddiness	10	8	80
11.	Emaciation	2	1	50

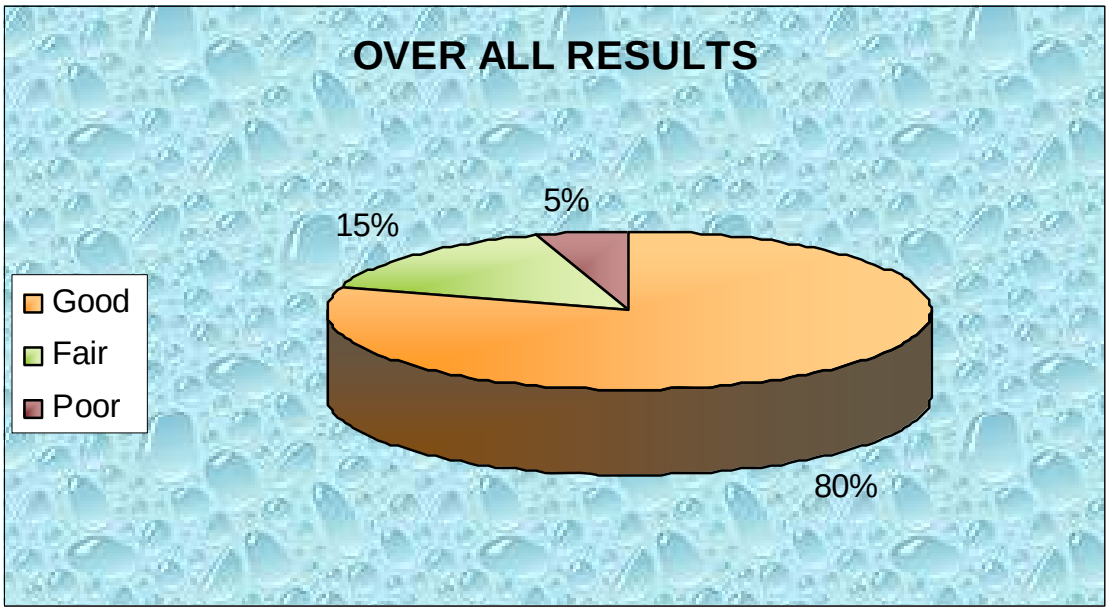


INFERENCE:

From the inference, Heart Burn was relieved in 18 Patients (90%), Nausea and Vomiting was relieved in 19 Patients (95%), Pain in the Epigastric Region was relieved in 15 Patients (93.75%), Eructation was relieved in 10 Patients (83.33%), Giddiness and Emaciation was relieved in 8 Patients (80%) and 1 Patients (50%) respectively. Loss of Appetite, Borborygmus, Constipation, Diarrhoea and Bloating were relieved in all patients (100%).

OVER ALL RESULTS

S.No	Grade	No.of.Cases	Percentage (%)
1.	Good	16	80%
2.	Fair	3	15%
3.	Poor	1	5%



INFERENCE :

Among the 20 Cases, 80% of Cases show Good Results, 15% of Cases Show fair Results and 1% of Case show poor Result.

BIO – CHEMICAL AND ENDOSCOPY REPORT OF IP CASES

S No	I.P NO	Name	Age/ Sex	Occupation	Date of Admission	Date of Discharge	Total No.of Days Treated	Blood Sugar F mg%	Blood Urea mg%	Serum Cholesterol mg%	Blood Group	Endoscopy Report	
												BT	AT
1.	1316/3881	Viyayalakshmi	42/F	House Wife	06.09.07	26.09.07	20	94	19	182	O+ve	Gastritis	Normal Study
2.	1332/5011	Vengatesan	46/M	Labour	09.09.07	27.09.07	18	89	29	192	A+ve	Gastritis	-
3.	1608/7985	Purusothaman	42/M	Labour	14.10.07	30.10.07	16	102	23	184	A+ve	Gastritis	-
4.	1632/8459	Pushpavathi	60/F	House Wife	15.10.07	15.11.07	30	96	18	174	O+ve	Normal Study	-
5.	1860/9883	Rahamathulla	32/M	Teacher	23.11.07	08.12.07	15	82	26	165	O+ve	Gastritis	-
6.	1923/3466	Selvi	30/F	House Wife	29.11.07	25.12.07	27	84	18	161	A+ve	Normal Study	-
7.	1730/5143	Thangaraj	53/M	Labour	03.11.07	19.11.07	16	89	29	172	B+ve	Gastritis	-
8.	1938/4164	Devaki	43/F	House Wife	04.12.07	09.01.08	35	132	24	168	A+ve	Normal Study	-
9.	2039/9602	Elavarasan	47/M	Advocate	20.12.07	14.01.08	24	84	19	173	O+ve	Gastritis	-
10.	2053/580	Tamizharasi	33/F	House wife	24.12.07	10.01.08	16	82	18	173	O+ve	Normal Study	-
11.	2067/1273	Pranol Kumar	46/M	Advocate	26.12.07	14.01.08	18	90	29	188	B+ve	Gastritis	-
12.	2139/5478	Chamundeswari	45/F	House Wife	07.01.08	25.01.08	18	210	29	196	O+ve	Gastritis	-
13.	2250/1445	Franklin	47/M	Electrician	26.01.08	27.02.08	31	109	26	200	O+ve	Gastritis	-
14.	2251/1542	Latha	34/F	House Wife	26.01.08	24.02.08	29	135	22	156	AB+ve	Normal Study	-
15.	2276/2002	Nandha Gopal	25/M	Hotel Server	27.01.08	15.02.08	19	82	18	145	O+ve	Gastritis	-
16.	2380/7991	Perumal	62/M	Watchman	13.02.08	01.03.08	17	90	25	177	B+ve	Gastritis	-
17.	2470/1753	Meenatchi Sundharam	45/M	Teacher	23.02.08	14.03.08	21	256	28	172	O+ve	Gastritis	-
18.	2529/5331	Chitra	45/F	House Wife	04.03.08	20.03.08	16	105	18	172	O+ve	Gastritis	-
19.	2586/8430	Kathiresan	67/M	Watchman	12.03.08	03.04.08	19	104	24	185	AB+ve	Gastritis	-
20.	2641/1412	Ramesh	34/M	Labour	15.03.08	01.04.08	16	94	20	146	O+ve	Gastritis	-

LABORATORY INVESTIGATION REPORT OF IP CASES

S. No	IP No	Name	Haematological Reports														Urine Analysis						Stool Examination		
			B.T				A.T				B.T		A.T		B.T Hgmg %	A.T Hg mg %	B.T			A.T			Ova	Cyst	Occult blood
			TC/ Cells/ cumm	DC%			TC/ Cells/ cumm	DC%			ESR(mm)						Al	Su	Dep	Al	Su	Dep			
				P	L	E		P	L	E	½ hr	1 hr	½ hr	1 hr											
1.	1316/3881	Viyayalakshmi	9400	58	36	6	9600	60	33	7	11	20	9	15	11	11	-	-	FPC	-	-	-	-	-	-
2.	1332/5011	Vengatesan	8200	58	35	7	8900	60	38	2	12	24	10	16	10.5	10.5	-	-	-	-	-	-	-	-	-
3.	1608/7985	Purusothaman	9400	63	30	7	9700	64	33	3	15	20	11	15	11	11.5	-	-	-	-	-	-	-	-	-
4.	1632/8459	Pushpavathi	8200	58	35	7	8700	61	36	3	10	20	8	16	10	10.5	-	-	-	-	-	-	-	-	-
5.	1860/9883	Rahamathulla	8700	52	43	5	8900	62	36	2	2	5	2	7	10	10	-	-	-	-	-	-	-	-	-
6.	1923/3466	Selvi	9700	57	34	9	10100	60	35	5	14	30	10	17	10.5	11.5	-	-	-	-	-	-	-	-	-
7.	1730/5143	Thangaraj	9900	58	36	6	10200	60	38	2	9	16	9	15	12.5	12.5	-	-	-	-	-	-	-	-	-
8.	1938/4164	Devaki	9800	58	36	6	10000	63	33	4	12	20	10	20	9	10	-	-	FPC	-	-	FPC	-	-	-
9.	2039/9602	Elavarasan	9500	59	33	8	9700	59	37	4	20	36	14	22	11	11	-	-	-	-	-	-	-	-	-
10.	2053/580	Tamizharasi	10400	66	28	6	10400	59	39	2	4	11	4	8	9.5	9.5	-	-	-	-	-	-	-	-	-
11.	2067/1273	Pranol Kumar	10100	61	32	7	10200	60	36	4	6	13	6	10	12	12.5	-	-	-	-	-	-	-	-	-
12.	2139/5478	Chamundeswari	9700	58	35	7	9900	60	35	5	18	40	10	14	10	10	-	++	FPC	-	+	FPC	-	-	-
13.	2250/1445	Franklin	10500	64	31	5	10500	60	36	4	5	12	4	8	10.5	10.5	-	-	-	-	-	-	-	-	-
14.	2251/1542	Latha	10200	60	32	8	10300	60	37	3	11	20	10	13	10.5	10	-	-	FPC	-	-	-	-	-	-
15.	2276/2002	Nandha Gopal	9800	60	34	6	9900	63	34	3	5	12	4	9	13	12.5	-	-	-	-	-	-	-	-	-
16.	2380/7991	Perumal	9400	57	38	5	10000	61	34	5	12	20	10	14	11	11	-	-	FPC	-	-	-	-	-	-
17.	2470/1753	Meenatchi Sundharam	10700	64	31	5	10500	62	34	4	10	24	8	12	11	11.5	-	++	FPC	-	+	FPC	-	-	-
18.	2529/5331	Chitra	8800	58	34	8	9000	60	35	5	12	25	7	13	9.5	10.5	-	-	FPC	-	-	-	-	-	-
19.	2586/8430	Kathiresan	9600	58	36	6	9800	61	36	3	9	16	7	10	11.5	12	-	-	-	-	-	-	-	-	-
20.	2641/1412	Ramesh	9900	57	37	6	9900	60	35	5	12	18	10	14	10.0	10.0	-	-	-	-	-	-	-	-	-

BIO – CHEMICAL AND ENDOSCOPY REPORT OF OP CASES

S No	OP NO	Name	Age/ Sex	Occupation	Treatment Started on	Blood Sugar F mg%	Blood Urea mg%	Serum Cholesterol mg%	Blood Group	Endoscopy Report	
										BT	AT
1.	9845	Ramu	58/M	Carpenter	23.11.07	103	28	207	0+ve	Not Taken	-
2.	1576	Latha	32/F	House Wife	27.11.07	135	22	156	B+ve	Not Taken	-
3.	1139	Selvi	42/F	House Wife	26.11.07	98	19	183	0+ve	Not Taken	-
4.	2128	Muniyamma	65/F	House Wife	29.11.07	279	21	184	A+ve	Not Taken	-
5.	3887	Senthamari	35/F	Teacher	04.12.07	95	18	167	0+ve	Not Taken	-
6.	5670	Aabitha	42/F	House Wife	08.12.07	82	21	163	0+ve	Not Taken	-
7.	6715	Muthamma	41/F	Labour	11.12.07	83	19	179	B+ve	Not Taken	-
8.	7110	Ramadosh	36/M	Engineer	12.12.07	101	29	171	0+ve	Gastritis	-
9.	7765	Vijayakumari	28/F	House Wife	14.12.07	70	16	147	0+ve	Gastritis	-
10.	7974	Sekar	53/M	Labour	15.12.07	98	29	208	0+ve	Not Taken	-
11.	9065	Devaki	45/F	House Wife	18.12.07	132	29	132	AB+ve	Not Taken	-
12.	206	Chitra	40/F	Typist	22.12.07	105	18	177	0+ve	Gastritis	-
13.	337	Perumal Samy	58/M	Security	23.12.07	90	25	177	0+ve	Not Taken	-
14.	727	Soodamani	58/F	House Wife	24.12.07	82	29	200	0+ve	Not Taken	-
15.	3316	Vijaya kumar	39/M	Electrician	31.12.07	126	23	158	0+ve	Not Taken	-
16.	3930	Krishna Moorty	30/M	Electrician	02.01.08	83	19	175	A+ve	Not Taken	-
17.	9005	Indhira	40/F	House Wife	19.01.08	93	25	174	0+ve	Not Taken	-
18.	769	Velmurugan	32/M	Labour	24.01.08	133	18	183	0+ve	Not Taken	-
19.	3576	R.Jaya	40/F	Labour	27.02.08	126	20	162	B+ve	Not Taken	-
20.	4922	Lalitha	46/F	House Wife	01.03.08	249	22	183	A+ve	Not Taken	-

LABORATORY INVESTIGATION REPORT OF OP CASES

S. No	IP No	Name	Haematological Reports														Urine Analysis						Stool Examination		
			B.T				A.T				B.T		A.T		B.T Hgmg %	A.T Hg mg %	B.T			A.T					
			TC/ Cells/ cumm	DC%			TC/ Cells/ cumm	DC%			ESR(mm)						Al	Su	Dep	Al	Su	Dep	Ova	Cyst	Occult blood
				P	L	E		P	L	E	½ hr	1 hr	½ hr	1 hr											
1.	9845	Ramu	9400	57	38	5	9600	59	38	3	2	5	2	5	11	11.5	-	-	FPC	-	-	-	-	-	-
2.	1576	Latha	10200	60	32	8	9900	62	34	4	11	20	10	14	10.5	10	-	-	FPC	-	-	-	-	Ascaris seen	-
3.	1139	Selvi	9000	59	35	6	9400	60	36	4	20	42	10	18	10	9.5	-	-	FPC	-	-	-	-	-	-
4.	2128	Muniyamma	8700	52	44	4	9000	54	44	2	5	12	3	7	9	9.5	-	+++	FPC	-	+	FPC	-	-	-
5.	3887	Senthamari	9800	62	33	5	10000	61	36	3	11	20	7	11	10	10.5	-	-	FPC	-	-	-	-	-	-
6.	5670	Aabitha	8000	48	46	6	8500	55	40	5	12	25	10	16	7.5	8	-	-	FPC	-	-	-	-	-	-
7.	6715	Muthamma	8200	57	38	5	8200	60	36	4	22	40	10	20	8.5	8.5	-	-	FPC	-	-	-	-	-	-
8.	7110	Ramadosh	9100	61	35	4	9400	55	41	4	3	4	3	5	12.2	12.5	-	-	-	-	-	-	-	-	-
9.	7765	Vijayakumari	9800	57	38	5	9600	60	34	6	12	20	6	13	9	9	-	-	-	-	-	-	-	-	-
10.	7974	Sekar	10400	63	31	6	10200	62	35	3	4	9	4	7	12	12.5	-	-	FPC	-	-	-	-	-	-
11.	9065	Devaki	9800	58	36	6	10200	60	38	2	12	20	9	11	9	10.5	-	-	FPC	-	-	-	-	-	-
12.	206	Chitra	8800	58	34	8	9200	57	38	5	12	25	10	16	9.5	10	-	-	FPC	-	-	FPC	-	-	-
13.	337	Perumal Samy	9400	57	38	5	9800	61	35	4	12	20	7	14	11	11.5	-	-	FPC	-	-	-	-	-	-
14.	727	Soodamani	9000	58	36	6	9100	57	38	5	12	25	8	15	9.5	11	-	-	FPC	-	-	-	-	-	-
15.	3316	Vijaya kumar	9400	55	41	4	9300	59	37	4	2	3	3	5	11	11.5	-	-	FPC	-	-	-	-	E.h seen	-
16.	3930	Krishna Moorty	8200	57	38	5	8700	60	37	3	12	20	10	15	8.5	9	-	-	FPC	-	-	FPC	-	-	-
17.	9005	Indhira	9400	60	34	6	9900	62	33	5	11	20	10	15	10.5	11	-	-	FPC	-	-	-	-	-	-
18.	769	Velmurugan	9400	58	36	6	9800	61	35	4	12	20	7	13	11	10.5	-	-	FPC	-	-	FPC	-	-	-
19.	3576	R.Jaya	10000	61	35	4	10200	64	32	4	15	34	5	12	10	9.5	-	-	FPC	-	-	-	-	Ascaris seen	-
20.	4922	Lalitha	10200	63	31	6	10200	62	36	2	12	25	6	14	10.5	11	-	-	FPC	-	-	-	-	-	-

ANNEXURE – VI

BIO- STATISTICS

To Study variation in one or more attributes, the date are expressed mostly as proportions. If a sample is divided into only two classes such as successes and failures, it is said to have a binomial classification.

$$P = \frac{\text{Number of individuals having a Specific Character}}{\text{Total Number}}$$

$$P = \frac{\text{Character in a binomial distribution is expressed}}{\text{Total Number}}$$

q = probability of non – occurence of the same .

STANDARD ERROR OF PROPORTION (S.E.P)

The probability or Proportional changes of positive or negative occurence of an attribute or a character in a population or universe follows.

Binomial Frequency Distribution

$$S.E.P = \sqrt{\frac{Pq}{N}}$$

Probability of difference occuring by chance can be found by applying Z test as done in the case of means,

$$Z = \frac{p - P}{S.E.P}$$

PEPTIC ULCER DISEASE

Subjective Parameter

1. Heart Burn
2. Pain in the epigastric region
3. Loss of Appetite
4. Nausea and vomiting

HYPOSTHESIS

Let us consider that we expect if the clinical is above 92% it is significant

Level of Significance $\partial = 0.05$

HEART BURN:

P = 0.92

n = No.of Cases = 20

p = 18/20 = 0.9

Test Statistic

$$Z = \frac{p - P}{\sqrt{Pq/n}} = \frac{0.9 - 0.92}{\sqrt{\frac{0.92 \times 0.08}{20}}}$$

$$= \frac{0.02}{0.0606} = 0.330$$

Table Value^{t} Table = 2.101

Conclusion: Since calculated value is less than the test value, treatment is effective.

PAIN IN THE EPIGASTRIC REGION :

P = 0.92, n = 20, P = 15/16 = 0.93

$$Z = \frac{p - P}{\sqrt{Pq/n}} = \frac{0.93 - 0.92}{\sqrt{\frac{0.92 \times 0.08}{20}}}$$

$$= \frac{0.01}{0.0606} = 0.1650$$

Table value^{t} = 2.101 > 0.1650

LOSS OF APPETITE

P = 0.92, n = 20, P = 20/20 = 1

$$Z = \frac{p - P}{\sqrt{Pq/n}} = \frac{1.0 - 0.92}{\sqrt{\frac{0.92 \times 0.08}{20}}}$$

$$= \frac{0.08}{0.0606} = 1.320$$

Table value ± Table = 2.101 > 1.320

NAUSEA AND VOMITING

P = 0.92, n = 20, P = 19/20 = 0.95

$$Z = \frac{p - P}{\sqrt{Pq/n}} = \frac{0.95 - 0.92}{\sqrt{\frac{0.92 \times 0.08}{20}}}$$

$$= \frac{0.03}{0.0606} = 0.4950$$

Table value ± Table = 2.101 > 0.4950

TABLE RESULTS OF STATISTICAL ANALYSIS OF SIGNS AND SYMPTOMS OF 20 PEPTIC ULCER PATIENTS, G.S.M.C, CHENNAI – 106.

S.No	Signs and Symptoms	Proportion		Statistical Test Criteria	P - Value	Significance of Difference
		Before Treatment	After Treatment			
1.	Heart Burn	100%	10 %	0.330	P<0.05	Significant
2.	Pain in the Epigastric region	80%	6.25%	0.1650	P<0.05	Significant
3.	Loss of appetite	100%	0%	1.320	P<0.05	Significant
4	Nausea and Vomiting	100%	5%	0.4950	P<0.05	Significant

DISCUSSION

Eri Gunmam, a clinical entity described by yugimuni in his Yugi Vaidhya Chindamani 800 is one among the classification of **Gunma Noi**. The classical symptoms are Heart burn, loss of Appetite, Pain in the Epigastric region, Nausea & Vomiting. These clinical features can be well compared with peptic ulcer.

20 Patients were selected and admitted in the In–Patient ward of Govt- Siddha Medical College, attached to Arignar Anna Hospital, Arumbakkam, Chennai – 106. All necessary investigation were carried out to all patients and trial medicines were given. Regular daily follow up were done. All the Patients were strictly advised to attend the Op after discharged from In Patient ward. Total duration of treatment ranges between 30 to 45 days.

Another 20 Patients were treated in Out-patient department. All Patients were advised to follow, Strict diet restriction with yogasanam.

AGE :

Out of 20 Cases there was no case below 20 years. High incidence of cases was noted in age ranging of 41-50 during the study. Among them 50% of cases were affected in the age in between this range. This is because of the change in food habits. Alcoholism, smoking, Stress full Conditions etc.

SEX :

In the Selected patients, 60% were Males, and 40% were females.

SOCIO- ECONOMIC STATUS :

During the study, 65% of the patients were from poor Socio-economic status (monthly income upto Rs. 5,500) and 35% from the middle class (monthly income upto Rs.5000 to Rs.15,000) Population, People living in poor socio economic status were more affected due to **poor hygiene, malnutrition and Alcohol intaker more.**

OCCUPATION:

Since most of the selected patients belong to the category of Labour (20%), Watchman (10%), Advocate (10%), Teacher (10%). Hotel Server (5%) and Electrician (5%) and House wife (40%). They are mostly affected because of **irregular timings of food intaker, intense worries, stressful work** etc. Which enhance the severity of **EriGunmam.**

BLOOD GROUP:

Regarding Blood Group reference , 55% comes under O+ve, 20% in A +ve, 15% in B+ve, and 10%, comes under AB+ve. In **EriGunmam diseases, Mostly O+ve, & A+ve Patients were affected.**

PERSONAL HABITS:

Regarding Personal Habits, 35% were Alcoholics, 40% were Smokers, 50% were Betelnut and Tobacco chewers, 100% were spicy food and irregular food intakers, 65% were Emotionally stressed and 100% had higher Acid pepsin factor.

KAALAM:

From the inference, 75% of the cases comes under Azhal Kaalam 20% of the cases comes under vali Kaalam and 5% of the cases comes under Iya Kaalm.

PARUVAKKAALAM :

In this Study, 20% of the cases were in Kaarkaalam, 20% in Koothir Kaalam, 40% in Munpani Kaalam and 20% of the cases were in pinpani Kaalam,

THINAI :

From the study 80% of the cases were from Neithal nilam, 10% from marutham and kurinji.

OBSERVATION OF ALTERED MUKKUTRAM:

Vali

Out of 20 Cases Viyanan, Udhanan, Samanan and kirugaran was affected in all the patients (100%), Abanan was affected in 65%, Devathathan was affected in 65% of the patients.

Azhal :

Analagam and saathagam was affected in all the patients(100%) and Ranjagam was affected in 20% of the patients.

Iyam:

Klethagam and pothagam was affected in all patients (100%)

Ezhu Udal Kattugal:

Saaram was affected in all the patients 100%, senner in 20%, and oon in 20% of the patients.

Ennvagai Thervu:

Naa was affected in 65% vizhi in 20%, Sparism in 100%, and Malam, was affected in 65% of the cases.

Regarding Naadi, Vatha Pitham was felt in 55% and pitha vatham was felt in 45% of the cases. In Neikuri examination, 55% of the cases show snack like appearance which indicates vathaneer and, 45% of the cases show ring like appearance which indicates pithaneer.

SIGNS AND SYMPTOMS:

Heart Burn, Loss of appetite, Nausea and Vomiting were present in 100% of the cases, pain in the epigestic region in 80%, Bloating of the abdmen in 55%, Eructation in 60%, Borborygmus in 30%, constipation in 45%, Diarrahoea in 20%, Giddiness in 50% and Emaciation were present in 10% of the cases.

Investigations like TC, DC, ESR, Hb, Blood Sugar, Serum Cholesterol, Blood Urea were examined, urine analysis for Albumin, sugar and Deposits were taken and motion test for ova & cyst were investigated. Blood Group were taken. Endoscopy test were taken. 5% of the cases, H.Pylori Histological Study were taken. 75% of the patients had a Gastritis symptoms and 25% of the patients had normal study.

Suvai-Mukkutra Theory:

The disease occurs when there is an alteration in Mukkutram and seven Udal Kattugal. The five properties, Suvai (taste), Gunam (Properties), Veeriyam (potency), pirivu (class), and Mahimai (action) will bring all the kuttrams and Kattugal to its normal limits.

The trial medicine, Malliyathi chooranam has the following features of suvai and veeriyam.

S.No	Drug	Suvai	Veeriyam

1.	Kothumalli	Karppu	Thatpa Veppam
2.	Seeragam	Karppu, Inippu	Thatpam
3.	Sombu	Karppu, Inippu	Veppam
4.	Athimathuram	Inippu	Thatpam

Dose : 1gm twice a day with hot water after food.

The trial medicine, Bhojana Kudori Mathirai has the following features of suvai and veeriyam.

S.No	Drug	Suvai	Veeriyam
1.	Seeragam	Karppu, Inippu	Thatpa Veppam
2.	Millagu	Kaippu, Karppu	Veppam
3.	Indhuppu	Uppu	Veppam
4.	Ginger	Karppu	Veppam
5.	Chukku	Karppu	Veppam
6.	Perungayam	Kaippu, Kararappu	Veppam

Dose : 1 Tablet, once a day with hot water, after food.

The Trial medicines have Inippu, Uppu suvai, which neutralizes vatha humor and Inippu, Kaippu Suvai which neutralizes pitha humor. Thus the trial medicines neutralizes the deranged vatha, pitha humors.

CLINICAL STUDY:

All the patients were tested with Malliyathi Chooranam and Bhojana Kudori mathrai for an average of 30 days. Blood urine and motion were once again tested after the completion of treatment. Bio- Chemical analysis and pharmacological analysis were

done with trial medicines. Pharmacological study reveals that these trial medicines contains Anti-ulcer activity has significantly. The Trial medicines were safe, well tolerated and did not produce any toxicity.

The results, of Bio Chemical studies reveals that the medicine Malliyathi chooranam contains Acid radicals sulphate, chloride, Oxalate Basic Radicals such as Aluminium, Zinc, Magnesium, Calcium , Potassium, Sodium, Miscellaneous substances such as Alkaloids and Unsaturated compound.

Also Bhojana Kudori Mathirai Contains, Acid radicals Such as Sulphate, Chloride, Oxalate, Basic Radicals such as Aluminium, Ferrous Iron, Zinc, Magnesium , Calcium, Ammonium, Potassium, Sodium, Miscellaneous such as Starch, Alkolods and unsaturated compound.

The Microbiological Study of the Malliyathi Chooranam shows highly sensitivity to staphylococcus aureus and moderate sensitive to Escherichia coli and Bhojana Kudori Mathirai shows highly sensitive to staphylococcus aureus, Escherichia coli, and moderate sensitive to proteus.

The Bio-statistical report reveals that the result of treatment is significant.

All the patients are advised to practice pranayaman and Yogasanam. Patients are advised to follow diet restriction and to maintain proper hygiene.

Out of 20 Patients, 80% of the cases show good result, 15% of the cases show fair result and 5% of the cases show poor results.

Twenty patients of **Eri Gunmam** were treated in the out- Patient department with the trial medicines and regular follow up were made once in a week. This inference also shows good results.

The results obtained from the clinical study were good much encouraging.

SUMMARY

A Collective and comparative study of the disease **Erigunmam** is made covering all the aspects of the disease enclosing siddha and modern science.

- The peak incidence of Eri Gunmam was found in **41-50 years** of age of both sex.
- The Prevalence of the disease was high among lower class population (65%) and middle class population (15%)
- Among the Blood Group, **55% of the O+ve blood Group** were affected
- Among dietary patterns, **100%** of the patients **consume spicy and irregular food habits.**
- Regarding personal habits 40% of the male Patients were smoker and 35% were alcoholics.
- Naadi in Eri Gunmam patients felt as **vatha Pitham (55%) and Pitha Vatham (45%).**
- In Neikuri Examination, 55% show vathaneer and 45% show pithaneer.
- The Ingredients of trial Medicines were found to have the properties of controlling EriGunmam.
- The clinical trial conducted in selected patients was satisfactory and encouraging.
- The Bio-Chemical, Microbiological and pharmacological studies of the trial medicine show good results.
- The bio-Statistical report of the clinical trial shows significant results.
- Among the 20 Cases, 80% of the cases show good reulst and 15% of the cases fair result Similarly 20 Cases treated in the out Patients department also shows good results.

CONCLUSION

Eri Gunmam is a very Common disorder in our contemporary population which increasing the morbidity day by day.

The age, aetiological factors, Blood Group and Socio-Economic status were studied. Vatham is the predominal causes for the development of Eri Gunmam. The disease mainly affects the Gastrointestinal system with the involvement of stomach and duodenum in digestive distress.

The drugs are easily available and the dosage is also convenient.

No adverse effects were observed during the entire course of the treatment.

It was observed that the trail medicines, **Malliyathai chooranam** and **Bhojana Kudori Mathirai** fully qualifies as a treatment of **choice for Eri Gunmam.**

The Clinical trail conducted in selected patients was satisfactory and encouraging.

BIO – CHEMICAL AND ENDOSCOPY REPORT OF IP CASES

S No	I.P NO	Name	Age/ Sex	Occupation	Date of Admission	Date of Discharge	Total No.of Days Treated	Blood Sugar F mg%	Blood Urea mg%	Serum Cholesterol mg%	Blood Group	Endoscopy Report	
												BT	AT
1.	1316/3881	Viyayalakshmi	42/F	House Wife	06.09.07	26.09.07	20	94	19	182	O+ve	Gastritis	Normal Study
2.	1332/5011	Vengatesan	46/M	Labour	09.09.07	27.09.07	18	89	29	192	A+ve	Gastritis	-
3.	1608/7985	Purusothaman	42/M	Labour	14.10.07	30.10.07	16	102	23	184	A+ve	Gastritis	-
4.	1632/8459	Pushpavathi	60/F	House Wife	15.10.07	15.11.07	30	96	18	174	O+ve	Normal Study	-
5.	1860/9883	Rahamathulla	32/M	Teacher	23.11.07	08.12.07	15	82	26	165	O+ve	Gastritis	-
6.	1923/3466	Selvi	30/F	House Wife	29.11.07	25.12.07	27	84	18	161	A+ve	Normal Study	-
7.	1730/5143	Thangaraj	53/M	Labour	03.11.07	19.11.07	16	89	29	172	B+ve	Gastritis	-
8.	1938/4164	Devaki	43/F	House Wife	04.12.07	09.01.08	35	132	24	168	A+ve	Normal Study	-
9.	2039/9602	Elavarasan	47/M	Advocate	20.12.07	14.01.08	24	84	19	173	O+ve	Gastritis	-
10.	2053/580	Tamizharasi	33/F	House wife	24.12.07	10.01.08	16	82	18	173	O+ve	Normal Study	-
11.	2067/1273	Pranol Kumar	46/M	Advocate	26.12.07	14.01.08	18	90	29	188	B+ve	Gastritis	-
12.	2139/5478	Chamundeswari	45/F	House Wife	07.01.08	25.01.08	18	210	29	196	O+ve	Gastritis	-
13.	2250/1445	Franklin	47/M	Electrician	26.01.08	27.02.08	31	109	26	200	O+ve	Gastritis	-
14.	2251/1542	Latha	34/F	House Wife	26.01.08	24.02.08	29	135	22	156	AB+ve	Normal Study	-
15.	2276/2002	Nandha Gopal	25/M	Hotel Server	27.01.08	15.02.08	19	82	18	145	O+ve	Gastritis	-
16.	2380/7991	Perumal	62/M	Watchman	13.02.08	01.03.08	17	90	25	177	B+ve	Gastritis	-
17.	2470/1753	Meenatchi Sundharam	45/M	Teacher	23.02.08	14.03.08	21	256	28	172	O+ve	Gastritis	-
18.	2529/5331	Chitra	45/F	House Wife	04.03.08	20.03.08	16	105	18	172	O+ve	Gastritis	-
19.	2586/8430	Kathiresan	67/M	Watchman	12.03.08	03.04.08	19	104	24	185	AB+ve	Gastritis	-
20.	2641/1412	Ramesh	34/M	Labour	15.03.08	01.04.08	16	94	20	146	O+ve	Gastritis	-

LABORATORY INVESTIGATION REPORT OF IP CASES

S. No	IP No	Name	Haematological Reports														Urine Analysis						Stool Examination		
			B.T				A.T				B.T		A.T		B.T Hgmg %	A.T Hg mg %	B.T			A.T					
			TC/ Cells/ cumm	DC%			TC/ Cells/ cumm	DC%			ESR(mm)						Al	Su	Dep	Al	Su	Dep	Ova	Cyst	Occult blood
				P	L	E		P	L	E	½ hr	1 hr	½ hr	1 hr											
1.	1316/3881	Viyayalakshmi	9400	58	36	6	9600	60	33	7	11	20	9	15	11	11	-	-	FPC	-	-	-	-	-	-
2.	1332/5011	Vengatesan	8200	58	35	7	8900	60	38	2	12	24	10	16	10.5	10.5	-	-	-	-	-	-	-	-	-
3.	1608/7985	Purusothaman	9400	63	30	7	9700	64	33	3	15	20	11	15	11	11.5	-	-	-	-	-	-	-	-	-
4.	1632/8459	Pushpavathi	8200	58	35	7	8700	61	36	3	10	20	8	16	10	10.5	-	-	-	-	-	-	-	-	-
5.	1860/9883	Rahamathulla	8700	52	43	5	8900	62	36	2	2	5	2	7	10	10	-	-	-	-	-	-	-	-	-
6.	1923/3466	Selvi	9700	57	34	9	10100	60	35	5	14	30	10	17	10.5	11.5	-	-	-	-	-	-	-	-	-
7.	1730/5143	Thangaraj	9900	58	36	6	10200	60	38	2	9	16	9	15	12.5	12.5	-	-	-	-	-	-	-	-	-
8.	1938/4164	Devaki	9800	58	36	6	10000	63	33	4	12	20	10	20	9	10	-	-	FPC	-	-	FPC	-	-	-
9.	2039/9602	Elavarasan	9500	59	33	8	9700	59	37	4	20	36	14	22	11	11	-	-	-	-	-	-	-	-	-
10.	2053/580	Tamizharasi	10400	66	28	6	10400	59	39	2	4	11	4	8	9.5	9.5	-	-	-	-	-	-	-	-	-
11.	2067/1273	Pranol Kumar	10100	61	32	7	10200	60	36	4	6	13	6	10	12	12.5	-	-	-	-	-	-	-	-	-
12.	2139/5478	Chamundeswari	9700	58	35	7	9900	60	35	5	18	40	10	14	10	10	-	++	FPC	-	+	FPC	-	-	-
13.	2250/1445	Franklin	10500	64	31	5	10500	60	36	4	5	12	4	8	10.5	10.5	-	-	-	-	-	-	-	-	-
14.	2251/1542	Latha	10200	60	32	8	10300	60	37	3	11	20	10	13	10.5	10	-	-	FPC	-	-	-	-	-	-
15.	2276/2002	Nandha Gopal	9800	60	34	6	9900	63	34	3	5	12	4	9	13	12.5	-	-	-	-	-	-	-	-	-
16.	2380/7991	Perumal	9400	57	38	5	10000	61	34	5	12	20	10	14	11	11	-	-	FPC	-	-	-	-	-	-
17.	2470/1753	Meenatchi Sundharam	10700	64	31	5	10500	62	34	4	10	24	8	12	11	11.5	-	++	FPC	-	+	FPC	-	-	-
18.	2529/5331	Chitra	8800	58	34	8	9000	60	35	5	12	25	7	13	9.5	10.5	-	-	FPC	-	-	-	-	-	-
19.	2586/8430	Kathiresan	9600	58	36	6	9800	61	36	3	9	16	7	10	11.5	12	-	-	-	-	-	-	-	-	-
20.	2641/1412	Ramesh	9900	57	37	6	9900	60	35	5	12	18	10	14	10.0	10.0	-	-	-	-	-	-	-	-	-

BIO – CHEMICAL AND ENDOSCOPY REPORT OF OP CASES

S No	OP NO	Name	Age/ Sex	Occupation	Treatment Started on	Blood Sugar F mg%	Blood Urea mg%	Serum Cholesterol mg%	Blood Group	Endoscopy Report	
										BT	AT
1.	9845	Ramu	58/M	Carpenter	23.11.07	103	28	207	0+ve	Not Taken	-
2.	1576	Latha	32/F	House Wife	27.11.07	135	22	156	B+ve	Not Taken	-
3.	1139	Selvi	42/F	House Wife	26.11.07	98	19	183	0+ve	Not Taken	-
4.	2128	Muniyamma	65/F	House Wife	29.11.07	279	21	184	A+ve	Not Taken	-
5.	3887	Senthamari	35/F	Teacher	04.12.07	95	18	167	0+ve	Not Taken	-
6.	5670	Aabitha	42/F	House Wife	08.12.07	82	21	163	0+ve	Not Taken	-
7.	6715	Muthamma	41/F	Labour	11.12.07	83	19	179	B+ve	Not Taken	-
8.	7110	Ramadosh	36/M	Engineer	12.12.07	101	29	171	0+ve	Gastritis	-
9.	7765	Vijayakumari	28/F	House Wife	14.12.07	70	16	147	0+ve	Gastritis	-
10.	7974	Sekar	53/M	Labour	15.12.07	98	29	208	0+ve	Not Taken	-
11.	9065	Devaki	45/F	House Wife	18.12.07	132	29	132	AB+ve	Not Taken	-
12.	206	Chitra	40/F	Typist	22.12.07	105	18	177	0+ve	Gastritis	-
13.	337	Perumal Samy	58/M	Security	23.12.07	90	25	177	0+ve	Not Taken	-
14.	727	Soodamani	58/F	House Wife	24.12.07	82	29	200	0+ve	Not Taken	-
15.	3316	Vijaya kumar	39/M	Electrician	31.12.07	126	23	158	0+ve	Not Taken	-
16.	3930	Krishna Moorty	30/M	Electrician	02.01.08	83	19	175	A+ve	Not Taken	-
17.	9005	Indhira	40/F	House Wife	19.01.08	93	25	174	0+ve	Not Taken	-
18.	769	Velmurugan	32/M	Labour	24.01.08	133	18	183	0+ve	Not Taken	-
19.	3576	R.Jaya	40/F	Labour	27.02.08	126	20	162	B+ve	Not Taken	-
20.	4922	Lalitha	46/F	House Wife	01.03.08	249	22	183	A+ve	Not Taken	-

LABORATORY INVESTIGATION REPORT OF OP CASES

S. No	IP No	Name	Haematological Reports														Urine Analysis						Stool Examination		
			B.T				A.T				B.T		A.T		B.T Hgmg %	A.T Hg mg %	B.T			A.T			Ova	Cyst	Occult blood
			TC/ Cells/ cumm	DC%			TC/ Cells/ cumm	DC%			ESR(mm)						Al	Su	Dep	Al	Su	Dep			
				P	L	E		P	L	E	½ hr	1 hr	½ hr	1 hr											
1.	9845	Ramu	9400	57	38	5	9600	59	38	3	2	5	2	5	11	11.5	-	-	FPC	-	-	-	-	-	-
2.	1576	Latha	10200	60	32	8	9900	62	34	4	11	20	10	14	10.5	10	-	-	FPC	-	-	-	-	Ascaris seen	-
3.	1139	Selvi	9000	59	35	6	9400	60	36	4	20	42	10	18	10	9.5	-	-	FPC	-	-	-	-	-	-
4.	2128	Muniyamma	8700	52	44	4	9000	54	44	2	5	12	3	7	9	9.5	-	+++	FPC	-	+	FPC	-	-	-
5.	3887	Senthamari	9800	62	33	5	10000	61	36	3	11	20	7	11	10	10.5	-	-	FPC	-	-	-	-	-	-
6.	5670	Aabitha	8000	48	46	6	8500	55	40	5	12	25	10	16	7.5	8	-	-	FPC	-	-	-	-	-	-
7.	6715	Muthamma	8200	57	38	5	8200	60	36	4	22	40	10	20	8.5	8.5	-	-	FPC	-	-	-	-	-	-
8.	7110	Ramadosh	9100	61	35	4	9400	55	41	4	3	4	3	5	12.2	12.5	-	-	-	-	-	-	-	-	-
9.	7765	Vijayakumari	9800	57	38	5	9600	60	34	6	12	20	6	13	9	9	-	-	-	-	-	-	-	-	-
10.	7974	Sekar	10400	63	31	6	10200	62	35	3	4	9	4	7	12	12.5	-	-	FPC	-	-	-	-	-	-
11.	9065	Devaki	9800	58	36	6	10200	60	38	2	12	20	9	11	9	10.5	-	-	FPC	-	-	-	-	-	-
12.	206	Chitra	8800	58	34	8	9200	57	38	5	12	25	10	16	9.5	10	-	-	FPC	-	-	FPC	-	-	-
13.	337	Perumal Samy	9400	57	38	5	9800	61	35	4	12	20	7	14	11	11.5	-	-	FPC	-	-	-	-	-	-
14.	727	Soodamani	9000	58	36	6	9100	57	38	5	12	25	8	15	9.5	11	-	-	FPC	-	-	-	-	-	-
15.	3316	Vijaya kumar	9400	55	41	4	9300	59	37	4	2	3	3	5	11	11.5	-	-	FPC	-	-	-	-	E.h seen	-
16.	3930	Krishna Moorty	8200	57	38	5	8700	60	37	3	12	20	10	15	8.5	9	-	-	FPC	-	-	FPC	-	-	-
17.	9005	Indhira	9400	60	34	6	9900	62	33	5	11	20	10	15	10.5	11	-	-	FPC	-	-	-	-	-	-
18.	769	Velmurugan	9400	58	36	6	9800	61	35	4	12	20	7	13	11	10.5	-	-	FPC	-	-	FPC	-	-	-
19.	3576	R.Jaya	10000	61	35	4	10200	64	32	4	15	34	5	12	10	9.5	-	-	FPC	-	-	-	-	Ascaris seen	-
20.	4922	Lalitha	10200	63	31	6	10200	62	36	2	12	25	6	14	10.5	11	-	-	FPC	-	-	-	-	-	-